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## Contents

- 
- 3 *Update on the Study of the Economy of Rantoul, Illinois*  
David Gerard
- 
- 6 *Gambling as Economic Policy: Enumerating Why Losses Exceed Gains*  
Earl L. Grinols
- 
- 13 *Illinois Economic Forecast*  
Harvey B. Westbrook, Jr.
- 
- 16 *Illinois Revenue Forecast*  
Harvey B. Westbrook, Jr.
- 
- 17 *Forecast Statistics*

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## *Update on the Study of the Economy of Rantoul, Illinois*

**R**esults from the tenth Rantoul longitudinal survey indicate that the private sector is now optimistic about long-term prospects for the village economy. Private sector expectations for earnings and employment have generally stabilized or improved, and firms are reporting that the positive effects of an expanding village economy are beginning to outweigh the negative effects from the base closure. Even so, data from the recent past indicate that the upward trends in earnings and employment have not materialized.

The federal government announced the closure of Rantoul's Chanute Air Force Base in 1989, and the base was formally decommissioned in September 1993. In order to monitor the impact of the defense conversion process on the local economy the Bureau of Economic and Business Research at the University of Illinois at Urbana-Champaign initiated the Rantoul longitudinal study in the spring of 1990. The study is based on biannual surveys of Rantoul-area businesses, nonprofit organizations, schools, and the municipality. To account for differences in the impact of the base closure among firms, businesses are divided into six categories: retail, industrial, financial, artisan/contractor, financial, and professional. The most recent questionnaires were returned in the spring of 1994.

### **Description of Survey and Results**

Each survey includes questions about recent revenues and employment developments as well as expectations regarding future trends. The first set of questions relates to

current revenue levels and changes in these levels over the previous six-month period. However, measures of central tendency are not particularly insightful. Although the arithmetic mean is accurate, it has little representative value—in part, because of the wide dispersion of values for firm revenues and employment. In some cases the mean is taken from an insufficient number of respondents. Nevertheless, monitoring changes across firms within specific sectors can still be instructive.

Firms provide information about employment in the current period and the change in employment from the previous period. In addition, they project employment levels into the near-term future. Responses from firms that participated in each of the past two surveys are compared to see how well their expectations for the fall 1993 matched what actually occurred.

Finally, firms evaluated the overall village economy with respect to the expected adverse impact of the Chanute AFB closure and, alternatively, the expected positive impact of new or expanding businesses in the area for the latter half of 1993. These evaluations are made on a one-to-four scale, where one is a powerful impact and four a limited one. Businesses also evaluated the overall business climate for the next six months and for one year from the survey date. These assessments are made on a scale of one to 10, where one is very good and 10 is poor.

The observations that follow are based on data from eight previous surveys and the 57 responses received from a total of 286 questionnaires

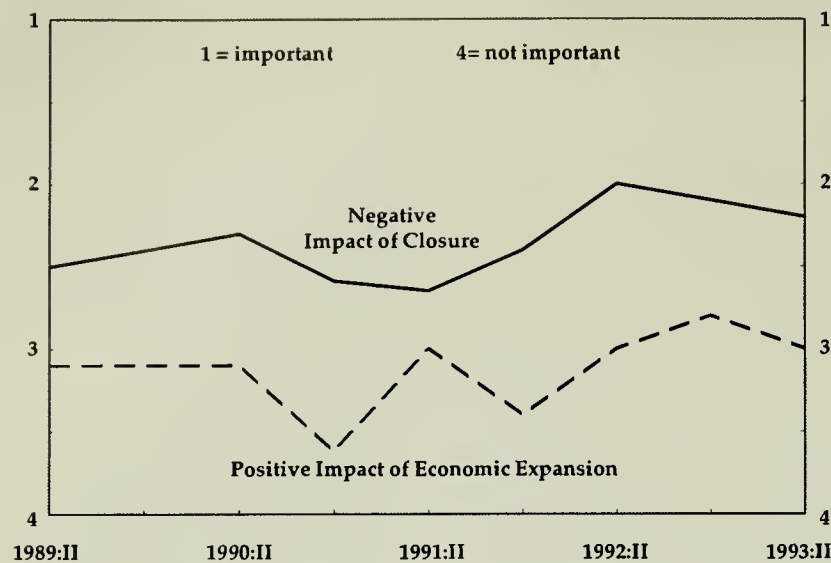
mailed in the spring of 1994. Because the data are taken from a nonrandom, voluntary-response survey, the results may provide insight into the state of the defense conversion process, but not the definitive statement.

### **General Trends**

The survey results suggest that revenues and employment are roughly stable. While long-run expectations for the Rantoul economy are promising, there is no clear upward trend within the revenue category for the current survey period. Overall, 46 percent of responding firms reported decreased earnings, 15 percent reported no change, and 39 percent reported an increase. The only firms reporting increased earnings were from the retail and professional sectors. Similarly, employment projections for responding firms are fairly stable, as firms outside the industrial sector do not anticipate substantial changes. A comparison of the expected deleterious effects of the base closure with the positive impact of new business expansion, coupled with an examination of sector-specific long-run trends provides for the most useful insight into the Rantoul economy.

The data comparing the negative impact of the base closure and the positive effects of new or expanding businesses indicate that areas hardest hit by base closure are retailers and nonprofit organizations. Each of these sectors has consistently considered the effects of the AFB closure as more important than the offsetting positive effects of expanding business activity within the community. (Chart 1)

**Chart 1. Expected Negative Impact of AFB Closure on the Retail Sector Compared with Expected Positive Effects of Economic Expansion, Fall 1989–Fall 1993**



Moreover, both currently report, on averagem, that they now expect the impact of the base closure to be more pronounced than they did when the longitudinal study began. The professional sector followed a similar trend until the most recent survey period, at which time reporting firms downplayed the negative impact of the AFB closure. (Chart 2) Industrial firms, which predominantly sell their goods outside Rantoul, continued to report that the effects of the local economy—whether from the base closure or new business—have had only minimal effects on employment and earnings within their sector.

Reporting firms are optimistic about expectations for the overall local economy. The average expectations for the Rantoul business climate over the next 12 months were the highest they have been in any survey for the financial, artisan/contractor, and professional sectors. As has been the case for each of the last three surveys, long-term expectations relating to the next year are better than those for the next six months; in contrast, three surveys from the fall of 1991

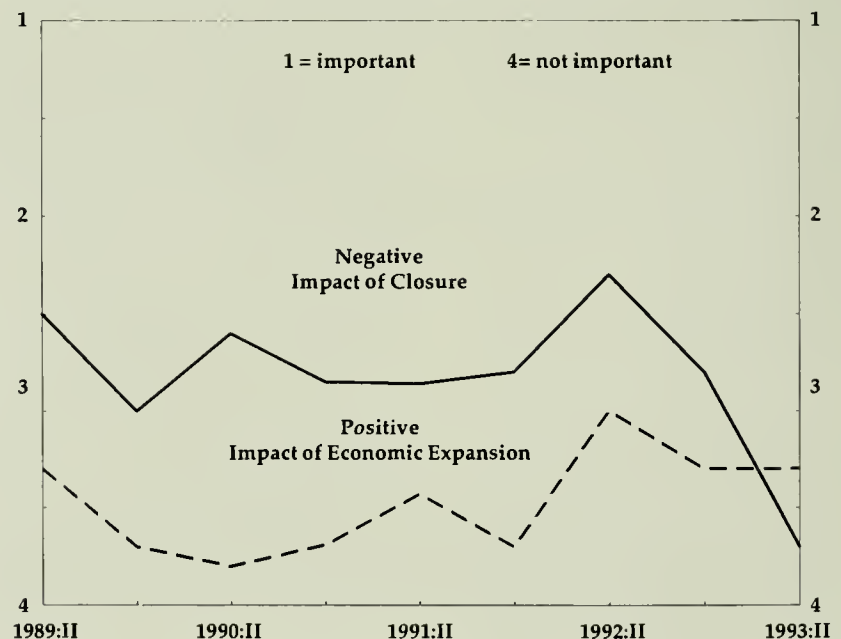
through the fall of 1992 showed exactly the opposite situation. According to those earlier surveys, businesses projected that prospects for the economy were better for the short run than for the long term. Not surprisingly, the recent change in these expectations from short-

term to long-term optimism coincides roughly with the national economic recovery.

## Specific Private Sector Trends

Retail respondents continue to be pessimistic about the local business climate, and survey data indicate that the local retail economy is soft, though somewhat more stable than in previous periods. The percentage of retail firms reporting a decline in gross sales increased to 58 percent from 44 percent and the percentage reporting increases in employment dropped to 20 percent from 50 percent between spring and fall 1993. Further, only 11 percent of firms plan to add full-time workers. However, the overall mean change in employees across the sector was less than one, and 68 percent of firms projected no change in employment for 1994. the table shows that retailers and non-profit organizations consider the impact of the base closing as more pronounced than do other sectors. Each nonprofit respondent reported a decline in contributions,

**Chart 2. Expected Negative Impact of AFB Closure on the Professional Sector Compared with Expected Positive Effects of Economic Expansion, Fall 1989–Fall 1993**



and none had increased employment levels, or expected to do so.

The professional sector, in contrast, placed a smaller emphasis on the AFB closure in the recent survey than in earlier ones. This sector provides a variety of services, including insurance, accounting, medical, and dental operations. One-half of the firms reported increased billings, and expectations for the next year are the best since the study began. Even so, this sector remains fairly pessimistic, which may be due to the decline in billings for one-third of the respondents and to the fact that no respondent planned to increase staff in the latter half of 1994. Nevertheless, employment is stable, as 87 percent of the firms reported no change in employment between spring and fall 1993, and 87 percent projected no change for 1994.

Although expectations of the negative impact of the base closure have been fairly stable, respondents from the financial-sector have become more optimistic about the positive effects of the expanding local economy, particularly in the long-term.

Industrial sector data give mixed signals, as sales and employment headed in opposite directions during fall 1993. None of the firms reported an increase in gross sales, and there was a substantial decline in some cases. However, each firm reported an increase in employment and planned further increases during 1994. During spring 1992

*Projected Economic Performance of Reporting Firms, July-December 1992 to July-December 1993*

	Revenues (%)			Employment (%)		
	Decrease	No Change	Increase	Decrease	No Change	Increase
Retail	58	0	42	11	68	21
Professional	33	17	50	13	87	0
Artisan/ Industrial	0	100	0	0	100	0
Financial	50	50	0	0	0	100
Nonprofit	50	0	50	33	33	33
	100	0	0	33	0	0

industrial firms projected increases in employment, but subsequently experienced an average cutback of 22 workers. Some employment gains for fall 1993 may be attributed to re-hires, but the mean overall change for all reporting firms was more than 70 workers, against a projection of 43 for the period. Further, firms projected average additions of 100 employees. These projections may indicate that the Rantoul industrial sector is growing along with the state and national economy. In addition, their assessment of the local business climate is the strongest since fall 1990.

### Concluding Remarks

Overall, earnings and employment do not indicate that the Rantoul economy is particularly strong. Nevertheless, responding firms are optimistic about long-term prospects. Possibly the strong national economy is bolstering business confidence. In February 1995 the Defense Department committed to building a finance center at the former base, which may pro-

vide up to 750 jobs and an annual payroll of more than \$22 million. It should be noted that the responses from the most recent surveys were completed prior to this announcement. The multiplier effects from the finance center, coupled with those from the projected expansion of the industrial base, may ease the pain of the base closure for struggling firms in the retail, professional, and nonprofit sectors.



## *Gambling as Economic Policy: Enumerating Why Losses Exceed Gains\**

There are three basic public policy questions related to gambling.

- How is gambling different from other forms of entertainment?
- Is gambling a good vehicle for raising taxes? and
- Does gambling create economic development?

Confusion over these questions is partly due to misinformation by the gambling industry and partly due to a faulty framework for evaluating the issues involved.

This article summarizes the economics of gambling, addressing each of the questions and providing the reader with a succinct review of current scholarship.

### **Gambling versus Ordinary Entertainment**

Gambling proponents defend the industry as providing just another form of entertainment. In fact, there would be little concern over how much gambling there is—any more than one cares how much golf, movie attendance, or opera there is—if it were not for the social problems and costs that gambling creates. These costs are quite high, and quite real.

Though the gambling industry prefers to refer to itself as “gaming” to emphasize the idea of leisure games played for entertainment and relaxation, this does not give the entire story. At least three things would need to be changed to convert gambling to ordinary entertainment in its social impact.

First, for a small percentage of the population, gambling is addictive, with all of the harmful connotations that addiction implies. This leads to costs imposed on society,

including on those who do not gamble. One, therefore, would have to prevent the addiction of the 1.5 to 5 percent of the population who will become addicted to gambling when the opportunity to gamble is available.

Second, although gambling merely transfers money from one person's pocket to another, it uses time and resources. Gambling beyond the point of recreation or entertainment reduces national income. This type of gambling would have to be eliminated.

Third, because the nature of gambling requires government oversight and restriction (the limitation of competition), it is an industry that offers artificially high profits for the few fortunate enough to be licensed. For example, in Joliet, Illinois investors put up \$7 million to fund a riverboat casino after being awarded a state license. News accounts (*Chicago Sun-Times*, April 18, 1994) reported that they nearly tripled their original investment—within the first six months of operation. This kind of profit drives others to seek to expand gambling for their own benefit. This usually requires convincing some governmental body or official to grant a license and to acquire that license for oneself. The recent \$20 million influence-buying attempt by a casino using two government insiders to help obtain a license in Illinois is an example of what can result (*Chicago Tribune*, March 28, 1995). The resulting con-

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Editor's Note: Extensive notes and references for this article can be found on page 12.



centration of money and influence in the hands of a small group in the gambling industry creates a climate of rent-seeking and constant pressure to expand gambling by licensing new operators. In the 1990s the gambling industry has repeatedly used its money for influence. The massive concentration of money and questionable influence into the hands of a few in the gambling industry would need to be eliminated.

One proposal to alleviate the problem of rent-seeking and influence-buying—as well as provide greater benefits for taxpayers—involves states owning the casinos themselves and then paying a management fee to the lowest-bidding company to operate the boats. This, of course, raises other problems such as the issue of a state competing with private entertainment businesses while holding a gambling monopoly. Another suggestion might be to tax casinos heavily enough that their rate of return is no higher than for ordinary businesses.

Were each of these changes made, gambling would become like other forms of entertainment. In that event, the amount of gambling would not be a social concern.

## The Social Costs of Gambling

Among gambling's social costs, those that are more easily quantifiable are associated with addicted gamblers. These costs derive from the apprehension, adjudication, and incarceration of those committing gambling-related crime, and from the cost of lost productivity of addicted gamblers. To these costs we must add the direct regulatory costs associated with gambling. If between one and five of every 100 of a firm's employees will become derelict due to gambling addiction, steal from the company, or worse, it represents a significant cost of doing business. The Champaign, Illinois, banker who stole nearly \$1

million by taking out fictitious loans in other people's names, using the proceeds for loan payments, and gambling is a good clinical example. The bank discovered the fraud when he missed a loan payment, after which he was tried, convicted, sentenced, and served time in jail. In addition to the costs born by the bank, social costs included costs to the legal system (the time of accountants, prosecutors, the judge), and incarceration.

Gambling-related crimes are economically significant. In a published report, the American Insurance Institute is cited as estimating that 40 percent of white collar crime has its roots in gambling.<sup>1</sup> The Institute finds that insurance fraud (such as arson) alone as related to gambling is \$1.3 billion per year, or more than \$10 annually for every working American.<sup>2</sup> The social costs per addicted gambler—just those that can be easily quantified as described here—are estimated to be between \$14,000 and \$30,000 per year.<sup>3</sup> Assuming, as is consistent with recent studies, that the increase in addicted gamblers as a percent of the adult population due to the introduction of gambling<sup>4</sup> is between 0.75 and 2.25 percent<sup>5</sup> implies social costs between \$100–\$300 per adult in a region where gambling becomes prevalent. Since I first made these estimates public,<sup>6</sup> I have learned of recent research that indicates this range may be too conservative and that the costs may be higher.<sup>7</sup> Notice that these costs are averaged over all adults in the area, not just those who gamble.

Gambling's social costs are enormous.<sup>8</sup> Applying them to the adult population of the United States implies losses equal to the lost output of an additional 1990:III–1991:II recession every eight to fifteen years, or an additional hurricane Andrew (the most costly natural disaster in American history) every year, or two 1993–level Midwest floods (the largest floods on record

for the area) annually.

Information from localized experiences highlights other costs to the public. For example, in October 1994 the front page of the *Des Moines Register* described a 19-year-old college student who began gambling, left college to be nearer to the Tama Indian Casino, and started taking out college loans at different banks, though he was no longer a student. According to family members, he told them that he “thought about gambling every second of every day.” He shot himself in the head on the day his car loan payment was due, leaving a note saying, “I’m out of control.” Another man killed himself recently in the parking lot of the Elgin, Illinois, casino after gambling. He had \$13 in his possession, although he had won about \$4,000 the day before at the nearby Arlington International Racecourse.

Placing a dollar figure on the cost of a suicide is not easy. The social costs I discussed here do not include the harmful effects of many social problems such as suicide. According to leading gambling researcher, Henry Lesieur, compulsive gamblers are more than five times more likely to commit suicide than the general population.<sup>9</sup> Areas where gambling is prevalent frequently stand out in a number of statistics that reflect the social problems associated with gambling. Nevada, for example, has the highest suicide rate for residents in the nation—its rate is more than double the national average.<sup>10</sup> It has the highest school dropout rate; is first for deaths per vehicle-mile driven; and, according to the January 1994 issue of the *Archives of Pediatric and Adolescent Medicine*, it led the nation in child death by abuse in 1979–1988 (a period when casino gambling was illegal in other parts of the nation except Atlantic City). Although Nevada does not lead in the statistics for all problems, it shows up prominently in statistics for other social prob-

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lems including crime. Cities that have introduced gambling report that family-related problems such as child abuse rose after the introduction of gambling.<sup>11</sup>

Concerning gambling and income reduction, activities that use time and resources without creating something of tangible value reduce national income. Even though the attraction for many who gamble is not leisure, those who speak for the industry often assert that all gambling is recreational. That is, regardless of motive or amount lost, the gambler must have purchased entertainment equal in value to what was lost. Many hold to this position in spite of evidence such as the survey in which less than half of the respondents said that they gambled for enjoyment and fully 27 percent said that they gambled to get rich.<sup>12</sup> This raises the question of whether someone who makes \$20,000 per year really experiences \$4,000 worth of entertainment in one night when that \$4,000 is lost gambling on a riverboat.<sup>13</sup> Paul Samuelson, Nobel prize-winning economist and internationally known authority and leader in the establishment of the theory of risk and uncertainty, has linked gambling to income reduction, by writing that "when pursued beyond the limits of recreation . . . gambling subtracts from the national income" (*Economics*, 1976, p. 425).

Because of the substantial case to be made against gambling as the creator of social problems, the gambling industry has spent a great deal of money for lobbyists, campaign contributions, marketing experts, and others to represent its case and add respectability. These efforts protect the interests of the industry in the tremendous profitability of a competition-limited sector. In Illinois, for example, the *Chicago Sun Times* (April 10, 1994) reported that nearly two-thirds of the legislature shared in contributions from the gambling industry

totaling \$675,000. The largest recipients were the then Democratic Speaker of the House and the Republican President of the Senate. In another state, a former president pro tem of the state senate has told me that the gambling interests "own the legislature." Often, as reported for example, in the *Columbia Journalism Review* (January / February 1994), those who speak for the industry are found to have financial ties to it in one form or another.

Other approaches are also used by the gambling industry. In Iowa, a group calling itself "Citizens for Riverboat Gambling" and paying tens of thousands of dollars for advertisements on television was discovered by the press to consist of just two members. "The entire campaign is being paid for by [the gambling] company that wants to bring a floating casino" to Iowa, according to the account in the October 20, 1994 *Des Moines Register*. The gambling industry also maintains contacts with selected academics and economic consulting firms to produce studies that give favorable reports of the effects of gambling. A number of these studies have been reviewed by the leading national gambling expert in this area, Robert Goodman. He ranked them in four categories: balanced, mostly balanced, mostly unbalanced, and unbalanced—depending on whether they were primarily just promotional pieces for the gambling industry or discussed the negative possibilities as well. He found that only two reports of the fourteen examined could be considered balanced and that "most could not be considered objective descriptions of economic benefits and costs."<sup>14</sup> I have been told by an economist at a consulting firm that a gambling company client terminated their contract when the firm refused to change the economic benefit numbers in its study to make them more favorable to the gambling company's interest.



It is not uncommon for the gambling industry to outspend its opponents by overwhelming margins of as much as \$100 to \$1 in areas where the industry wants to place new casinos. The recent poor showing of the industry in the November 8, 1994, elections has even suggested to some observers that unless gambling interests outspend those on the other side of the issue by \$75 to \$1 or more, the voters reject gambling. Gambling expansion initiatives failed in Colorado, Florida, the Navajo Reservation, Massachusetts, Rhode Island, and in New Mexico (the latter due to an illegality in the way in which the issue was placed on the ballot). In Waterloo, Iowa, voters rejected casino gambling on May 17, 1994, but the gambling interests were powerful enough that the issue was placed on the ballot again only four months later on September 27. Spending by the gambling industry was \$40 to \$1. The initiative failed. The gambling industry spent \$16.7 million dollars to \$1.6 million by opponents (\$10 to \$1) in their attempt to convince Florida voters to open their \$32 billion tourist market to the casino industry (Florida *Sun*, November 9, 1994). Floridians, who had twice before rejected casinos, voted down gambling by a margin greater than two to one. On April 4, 1994, Missouri voters rejected an amendment to their state constitution to allow games of chance, but the gambling industry was able to place the issue on the ballot for another vote in November 1994. The industry more than doubled its spending the second time around, bringing the ratio of spending to \$7 million to \$90 thousand (a ratio of \$78 to \$1), winning the initiative. Those knowledgeable about the political situation in Missouri doubt that the issue will be placed on the ballot again soon, now that the gambling industry has won. It is interesting that South Dakota, for which only 37 percent opposed video gambling in 1989,

found that opposition had risen to 47 percent by 1994.

The willingness of the gambling industry to support "cheerleading" publishing by academics and economic consulting firms, make large political contributions, devote millions of dollars to public advertising, and create "citizens-for-gambling groups" testifies to the amount of money at stake. The ability of the industry to pursue a strategy as it has in Florida, Iowa, Missouri, Michigan, and other jurisdictions whereby public votes are taken repeatedly when the gambling industry point of view fails is also quite impressive. Many question, however, if such activity leads to good government and policymaking in every case.

### Gambling as Tax Policy

Government bodies often act as if they believe that gambling taxes are costless revenues delivered without the pain of ordinary taxes. However, gambling taxes are more costly than taxes raised the ordinary way. An ordinary additional tax dollar costs the private sector in the neighborhood of \$1.17 to \$1.57 in social costs per dollar collected.<sup>15</sup> (For example, a 25 percent tax on an \$80 item raises the cost to the consumer to \$100, which could be high enough to dissuade the consumer from purchasing the item. Thus, both the consumer who loses the item and the seller who loses the sale bear social costs.) Assuming that fully 40 percent of gambling revenues are taxed, an adult that loses \$200 per year in gambling<sup>16</sup> would provide government with \$80 in taxes. Total social costs imposed are the \$80 lost plus the \$100 to \$300 in social costs. This means that gambling taxes cost between \$2.25 and \$4.75 per dollar raised. If gambling taxes are 20 percent of gross revenues (the usual rate for casino riverboats, for example), the cost per dollar range becomes from \$3.50 to \$8.50. This is far more costly than raising taxes

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the old fashioned way—by levying a conventional tax.

Additionally, a public body considering gambling for its taxes should know that as gambling continues to seek new outlets<sup>17</sup> existing gambling tax revenues become more uncertain. Gambling taxes should, therefore, be considered less stable than other forms of tax for many locations.

### **Dissociality versus Decent Debate**

Ground swell of public interest has never been the impetus for expansion of gambling. As indicated, pressure for gambling has come primarily from gambling promoters and groups that want to own a casino.

One way the gambling industry has responded is to promise economic development. As already explained, many of these studies are unbalanced in their analysis<sup>18</sup> so that even those close to the industry caution against taking these claims too seriously.<sup>19</sup>

A complementary strategy, reminiscent of the tobacco industry's response to early studies linking cancer with smoking, is to deny high social costs by denying that the spread of gambling will increase gambling addiction, or by denying the validity of unfavorable research. This includes questioning the credibility or motives of researchers,<sup>20</sup> even though the money made from the gambling industry is the obvious source of conflict of interest for those who speak for the industry.<sup>21</sup>

Another tactic, exemplified by plans of the gambling industry to locate in the narrow part of West Virginia between Ohio and Pennsylvania, is to divide and conquer based on "beggar-thy-neighbor" gambling competition. By having regions vie for each others' dollars, the industry can enhance its chances of expanding into both locations. In West Virginia, officials

were told that casinos would draw more than 80 percent of their patrons from nearby areas (notably Columbus and Cleveland, Ohio, and Pittsburgh, Pennsylvania). If such a great proportion of the gamblers will come from much larger population centers in neighboring states, why does the industry not locate its casinos there directly? In many cases, the answer is that they would like to, but have been turned down. The casinos in Gary, Indiana (targeting the Chicago market) will almost surely be cited by the industry in the future as a reason to introduce gambling into Chicago. By locating first in a neighboring area, the industry provides itself leverage for later expansion. The pattern can be noted in diverse locations across the country: Tunica, Mississippi, feeds on the Memphis, Tennessee, market; Las Vegas feeds on the California market, Atlantic City feeds on the Philadelphia market, and so on. In the case of East St. Louis, the casino objective was to attract money from St. Louis, Missouri, until casinos would be opened in St. Louis itself. The classic "race to the bottom" engendered by such competition naturally works in the favor of gambling expansion. However, when the bottom is reached—convenience gambling is offered in each region—few regions will attract money from other areas, though all will experience, to varying degrees, the associated social costs. Even though they suffer the social costs of gambling, tourist gambling centers like Las Vegas and Atlantic City avoid much of the costs when the gamblers take their problems back home.

### **Gambling as Economic Development**

In contrast to the impression of gambling as a powerful engine of job creation often provided by the



promotional literature produced by the gambling industry and its spokesmen, gambling operates under the same laws of economics as other business. It is different, as described earlier, only in its negative externalities. This means that when convenience gambling locates in a population center, drawing its clientele from nearby residents, it does not create jobs any more than adding a new restaurant to a large city would create jobs. When the casino or restaurant grows in size, its revenues come at the expense of the revenues of other business. One enterprise shrinks as the other grows, with the only lasting result being a shift of resources out of the other sectors into the expanding firm.

In principle, tourist gambling can lead to an expansion of the economic base (Las Vegas would be a minor town in the desert of Nevada if not for tourist gambling), but it does so at the expense of neighboring areas (primarily California, in the case of Nevada). Areas that develop successfully through casinos shrink the economies of neighboring areas while sending many of the social costs home with the problem gamblers (such as the banker mentioned earlier whose gambling was conducted elsewhere, but whose costs were paid in Champagn).

Whether any business adds to the economic base or diminishes it depends on whether the business draws more new dollars to the area that are then spent on goods and services in that area. To benefit the local economy these new dollars must exceed the number of dollars the business causes to be removed from the area. Because casinos have artificially high profit margins, are often owned by out-of-area investors, and frequently take dollars from the area's existing tourist base rather than attracting new tourists, the effect of gambling in many cases is to diminish the economic base and cost jobs. This possibility,

dependent on net export multiplier theory and regional input-output multiplier analysis is not in dispute among responsible economists.<sup>22</sup> However, it is difficult to find any gambling industry study that evaluates or even mentions this possibility. Discussions of how much money will be taken out of the economy by promoters in the form of profits or out-of-area purchases or how much will be used to fund later expansion into other areas is never included in industry proposals.

The claim is frequently heard that by introducing gambling a locality can regain revenues that are currently being drained by a distant gambling center. However, such a claim must be evaluated carefully. It is also possible that introducing gambling can increase the total of all gambling while having little or no effect on those who gamble at distant centers. In fact, it may even worsen the outflow by introducing more people to gambling. This was precisely the situation of Chicago between 1990 and 1993. In 1990, before casinos were introduced in Illinois, there were 760 thousand visits by Chicagoans to Atlantic City and Las Vegas. In 1993, after casino gambling had been available in Illinois for several years, there were still 760 thousand visits to Atlantic City and Las Vegas, but the total number of gambling visits had risen from 902 thousand to 2.5 million.<sup>23</sup>

If gambling is just a shell game— attracting dollars from one person's pocket to another and from one region to another—whose effects depend on the same rules of economics as other business, why do other businesses not receive the same amount of public attention? The question brings us full circle to the questions we posed at the beginning of this article.

## Summary and Conclusions

Apart from the social harm that it

causes, gambling would be just another inconsequential, low-technology business earning ordinary profits and exhibiting easy entry and exit. It is a logical impossibility for every area to win at the others' expense when gambling is present in every region. For the nation as a whole there will be no net economic development from the spread of gambling, but there will be the creation of a new social problem and the social costs that entails. The best research available today indicates that these costs are very high.

Because the pressure for new casinos will continue as long as the profits of gambling promoters are artificially high in consequence of the need for government oversight, and because "beggar-thy-neighbor" competition between localities provides incentives for an ill-considered race to the bottom, a national policy is needed if sensible choices based on a dispassionate comparison of the benefits and costs of gambling is to replace present trends. From a national perspective, the sole benefit of gambling is that it is an additional form of entertainment for the subset of users who gamble recreationally and can do so without harming themselves or others. The cost-benefit question is whether we need another form of entertainment badly enough that we are willing to pay for another social problem whose costs are equal to an additional recession every decade in order to have it.

## Notes

\*This article is prompted by the continuing debate over the expansion of gambling as a purported tool of economic development. The article refocuses attention on gambling as a social cost-benefit issue by summarizing the economic case against gambling. By framing the issue appropriately, leaders in Illinois and other states will be better able to make judgments about its value as economic policy.

1. American Insurance Institute, cited in *Casinos in Florida: an Analysis of the Economic and Social Impacts*, Executive Office of the Governor, Florida Office of Planning and Budgeting, p. 67.

2. Ibid.

3. For the most recent confirmations see *Casinos in Florida*, op. cit., pp. 72-73; Robert Goodman, *Legalized Gambling as a Strategy for Economic Development*, Center for Economic Development, University of Massachusetts, Amherst, March 1994, p. 63; and Maryland Department of Health and Mental Hygiene, Task Force on Gambling Addiction in Maryland, 1990.

4. Were we to include addicted gamblers already in the region as part of the costs of gambling, the cost computation would be higher.

5. The US Commission on the Review of the National Policy toward Gambling gives the basal rates of gambling addiction when only Las Vegas was offering legal casino gambling as .77 percent. Subsequent studies in areas that have introduced gambling suggest that the number of pathological gamblers will be between 1.5 and 5 percent of the population, depending on area and how one counts current versus lifetime addiction rates. Experience suggests that about 60 percent of the number of lifetime pathological gamblers will be active at any one time (see Rachel Volberg, "Assessing the Social and Treatment Costs of Gambling," delivered at the Seventh National Conference on Gambling Behavior, New London Connecticut, July 22-24, 1993, cited in Goodman op. cit., p. 64). Thus, taking various factors into account, introducing gambling would lead to between 1.5 and 3 percent active pathological gamblers, or an increase in the range of .75 and 2.25 percent.

6. See Earl L. Grinols, cited in Peter Passell, "The False Promise of Development by Casino," *New York Times*, June 12, 1994, and Earl L. Grinols, "Time for a National Policy," testimony before the Committee on Small Business, US Congress, September 22, 1994. Serial No. 103-1-4, US GPO, 1995, pp. 8-11, 71-76.

7. Many representatives of the gambling industry claim not to be knowledgeable about the computation of social costs of gambling, in spite of the fact that in places like Nevada gambling has been a major part of the economy for over 50 years and it has supposedly been a subject of study. With the spread of gambling to other parts of the country, however, more serious research is becoming available. Recently state of Florida economists independently estimated the costs of introducing casino gambling (*Casinos in Florida*, op. cit., pp. 28, 72-83). Using data supplied by the Florida Department of Corrections, and dividing by the adult population of Florida, the crime-related costs found were between \$270 and \$380 per adult. Using lower estimates of the cost per pathological gambler from earlier researchers, the Florida study re-estimated the cost to be between \$192 and \$338 per adult per year. These higher estimates overlap with the cost range described in the text.

8. Taking the mid-range figure of \$200 per adult, costs would equal \$39 billion, more than one-half percent of all US GDP.

9. Henry R. Lesieur, "Compulsive Gambling," *Society*, 1992, p. 46.

10. *US Statistical Abstract*, 1994.

11. See Jeffrey Bloomberg, Committee on Small Business, op. cit.

12. 39 percent said they gambled for entertainment. See P. Von Brook et al, "Gambling: Crime vs. Recreation," Information Plus: The information Series on Current Topics, 1990, cited in *Casinos in Florida*, op. cit., p. 69.

13. For an analogy, consider the effects of a strange fad whereby some people enjoy digging holes in the ground, hiding money in them, and then digging to find money hidden in holes that others have left. They even pay third parties to furnish ground, shovels, and food to be used in this sport. As long as they get enjoyment value from what they do, there is little to object to. However, if the digging attracts others who do not dig for enjoyment, but leave productive activity to dig for money, the time and resources devoted to this activity and making it possible reduces national income.

14. Goodman, op. cit., p. 16.

15. See Charles L. Ballard, John B. Shoven, and John Whalley, "General Equilibrium Computations of the Marginal Welfare Costs of Taxes in the United States," *American Economic Review*, 75, 1985, pp. 128-38, and E. K. "On the Marginal Welfare Cost of Taxation," *American Economic Review*, 77,

1987, pp., 11-23.

16. See Chicago Gaming Commission, "Economic and Other Impacts of a Proposed Gaming, Entertainment and Hotel Facility," Deloitte and Touche, pp. 146-151; "Response of the Developers of the Proposed Fox River Resort to the West Dundee Riverboat Project Task Force," Mirage Resorts, May 25, 1993, exhibit 1, and "Fox River Resort: A Presentation by Mirage Resorts, Inc.," West Dundee, Illinois, March 1993.

17. Pressure to expand gambling will remain as long as the rate of return on gambling investments is above the return on ordinary business with competition. This will be the case as long as gambling is regulated, which it must be.

18. I have described some of the ways in which the reports become unbalanced in my earlier paper, "Bluff or Winning Hand? Riverboat Gambling and Regional Employment and Unemployment," *Illinois Business Review*, April 1994; in testimony before the Speaker's Task Force on Gaming, Illinois House of Representatives, Springfield, Illinois, March 29, 1993 and before the Illinois Senate Executive Committee, Subcommittee on Gambling, Chicago Illinois, June 8, 1993. Optimistic assumptions and/or the choice of parameters on the extremes of, or even outside of, previous experience can explain some of the sources of unbalanced reports. In addition, industry-financed studies will often describe the positive money flows and benefits, but fail to document the negative flows and costs. By focusing on only part of the story the end product is incomplete. See, for example, Goodman, op. cit., p. 16.

19. William N. Thompson, Professor of Public Administration at the University of Nevada, Las Vegas writes that "the employment increases resulting from most gambling operations are illusory." ("The States Bet on Legalized Gambling," 1994 *World Book Year Book, Chicago: World Book*, 1994, p. 398. "There can be a lot of false expectations about long-term economic development," according to William Eadington. See Stephen J. Simurda, op. cit., p. 38.

20. See Committee on Small Business, op. cit. (statement of Professor Goodman).

21. Simurda, loc. cit.

22. I have employed such models myself for evaluating the job displacement effect of gambling proposals as when I estimated the effect of casinos in Chicago.

23. See George Papajohn and Patrick Reardon, "Dicey Possibility," *The Chicago Tribune*, May 15, 1994.



**S**teady expansion in the Illinois economy is predicted by the Illinois Econometric Model. The total economy is projected to expand at a moderate rate as declining growth in the goods-producing sector is offset by an increase in growth of the substantially larger services-producing sector.

### Employment

Growth in Illinois employment will be steady over the period forecasted by the Illinois Econometric Model (IEM). According to the model, developed by and maintained in the Bureau of Economic and Business Research, the rate of expansion in total nonagricultural employment will decline from 1.7 percent in 1995 to 1.3 percent through 1997. The slowdown in 1996 can be explained by declines in the pace of expansion of specific goods-producing industries. This slowdown in expansion is miti-

gated by the steady rate of growth in services-producing industries shown in Chart 1.

Employment in the goods-producing sector of the Illinois economy will grow at a slightly slower pace in 1996 and 1997. Growth in this sector is projected to decrease from 2.5 percent in 1995 to 1.1 percent and 0.8 percent in 1996 and 1997. Construction employment is expected to move upward by 4.7 percent in 1995 and then increase 5.1 percent and 4.7 percent in the next two years. Although the IEM projects a steady rise in employment in construction, this sector makes up only about 4 percent of the non-agricultural state economy, not large enough to offset the reduced growth of other goods-producing industries.

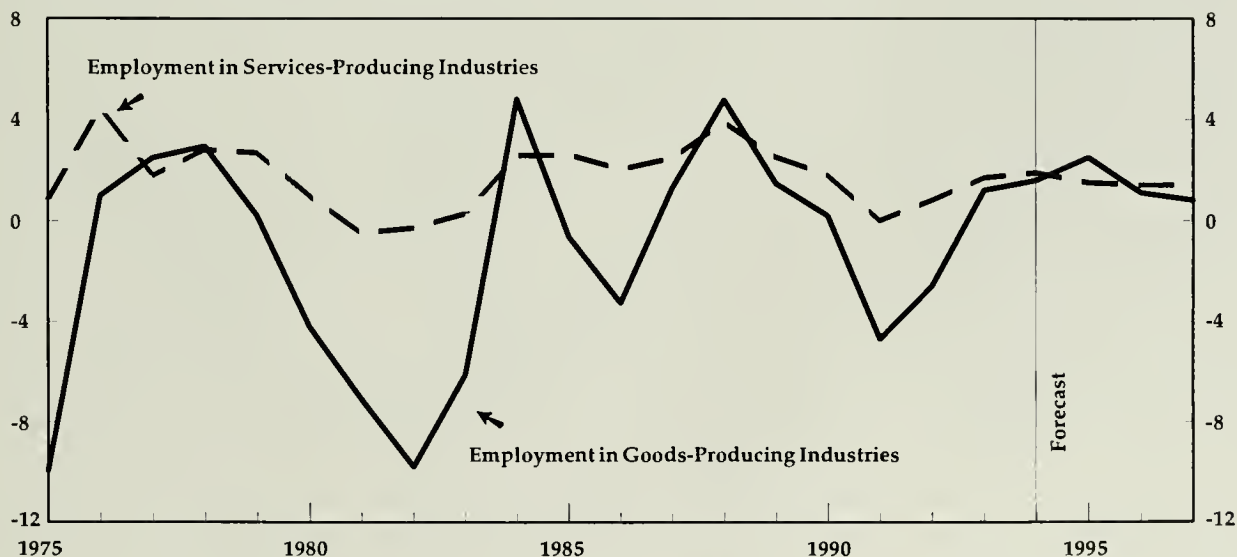
The reduced rate of expansion in nonagricultural employment, reflects a slowing of the rate of

growth in manufacturing. Manufacturing constitutes nearly one-fifth of the nonagricultural Illinois economy; thus, changes in employment developments in this sector are likely to have pronounced effects on trends relating to the whole. The IEM projects total manufacturing employment growth of 2.2 percent for 1995 and 0.2 percent in 1996; thereafter, there will be a slight decline. Durable manufacturing is expected to expand 3.2 percent in 1995, then decline slightly in 1996 and 1997. Nondurable manufacturing employment is projected to expand roughly 1 percent in 1995 and thereafter remain approximately unchanged.

The services-producing industries, nearly four-fifths of the

Editor's Note: The complete forecast statistics upon which this article is based can be found on pp. 17-18.

Chart 1. Percent Change in Growth in Goods-and Services-Producing Employment in Illinois



nonagricultural state economy, dominate the employment markets in the Illinois economy. The IEM projects between 1 and 2 percent employment expansion per annum in services-producing employment during the forecast period. Employment in wholesale trade, approximately 6.4 percent of the total statewide employment, is expected to grow at 3 percent in 1995 and then remain essentially unchanged in 1996 and 1997. Retail trade is anticipated to expand at 1.7 percent in 1995 then decrease to 0.7 percent and 1.1 percent in 1996 and 1997. The finance, insurance, and real estate subsector is expected to remain constant in 1995 but is projected to enlarge slightly in 1996 and 1997.

The services sector, a catch-all subsector in the services-producing industries, includes services related to business, health, legal, engineering, and management. The IEM projects employment growth in services of 2.5 percent for 1995 and 2.6 percent and 2.7 percent in 1996 and 1997, respectively. The expansion in this subsector is the source of the robust rate of increase in services-producing industries.

Increases in employment in the services-producing subsector will more than offset the slight decrease in growth in goods-producing industries. Government employment is not expected to expand in 1995, but will increase slightly in 1996 and 1997. Since this is a relatively small sector, 14 percent of the nonagricultural Illinois economy, even large expansions in this sector would not affect decreases in the state as a whole. Concentrated progress in the services-producing industries is consistent with forecasts of the national economy run by the WEFA Group, a national forecasting service.

## Personal Income

Real total personal income, ad-

justed for forecasts of inflation, will expand 2.4 percent in 1995. An increased growth of 3.2 percent and 2.8 percent is projected for 1996 and 1997. Although the IEM current forecast of personal income is slightly lower, reflecting the less optimistic forecasts of the national economy (see Chart 2), the projections are not significantly different from the most recent projections made by the IEM last quarter.

Nonagricultural personal income is expected to increase at a slightly lower rate than total personal income, implying stronger growth in the agricultural sector. However, the IEM does not forecast the agricultural sector directly. Total nonagricultural personal income is expected to expand 2.8 percent in 1995, then will fluctuate near this level through the remainder of the forecast period. The IEM forecasts 2.9 and 2.7 percent growth in nonagricultural personal income for 1996 and 1997. The increase in personal income is especially noteworthy as we remind ourselves that the forecasts

are adjusted to take into account the effects of inflation.

As was the case in employment, much of the increase in total personal income is the result of expansion in the services-producing industries. However, the forecasts of growth in goods-producing industries are higher than previous forecasts of the IEM. Growth in goods-producing industries is expected to reach 2.8 percent in 1995, then moderate to 2.2 percent in 1996 and 2 percent in 1997. The projected decrease in growth is smaller than was previously forecast by the IEM. Fourth quarter projections of the IEM forecast 1.8 percent growth in 1995 and 0.2 and 0.9 percent growth in 1996 and 1997.

Income in manufacturing industries can be expected to expand 3 percent in 1995, then grow only 2.1 percent in 1996 and 2.2 percent in 1997. Income in durable manufacturing will grow more slowly than in nondurable manufacturing. Durable manufacturing incomes are forecast to increase 3.9 percent

Chart 2. Percent Change in US Gross Domestic Product and Growth in Illinois Personal Income

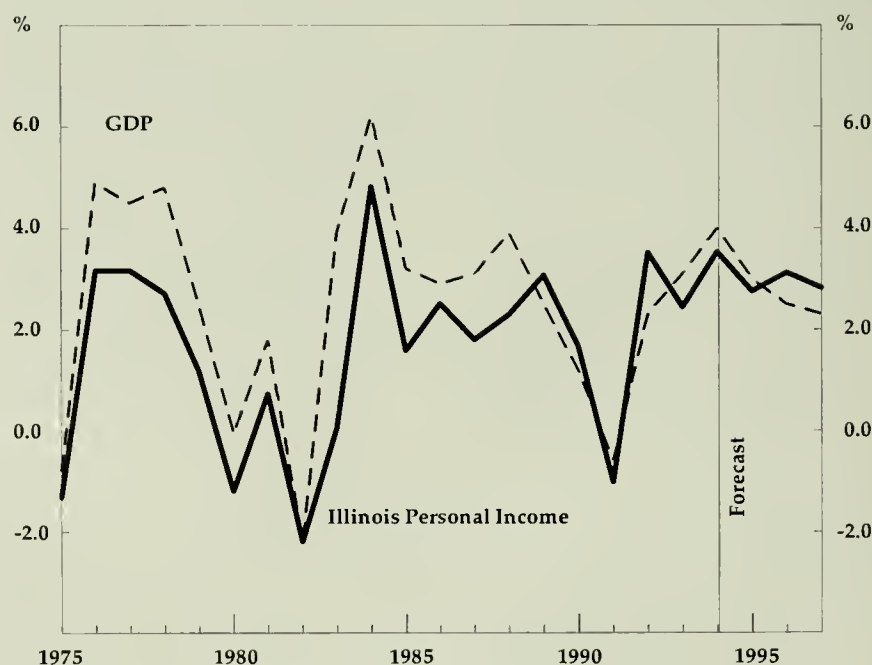
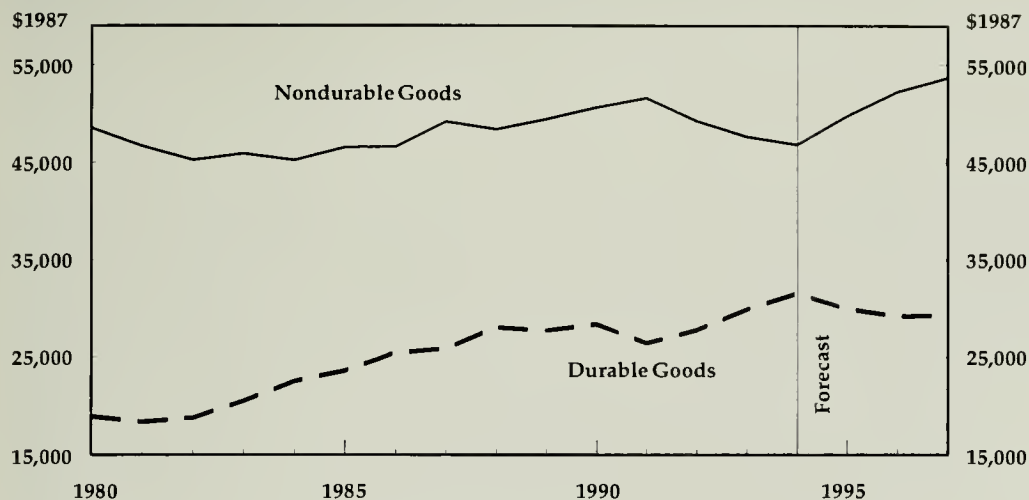




Chart 3. Real Illinois Retail Sales (thousands of 1987 dollars)



## Consumer Spending

Consumer spending, as measured by retail sales, is projected to expand steadily, fluctuating around a 2 percent annual rate of increase. A decline of nearly 5 percent in spending on durables is projected for 1995, followed by a smaller contraction, then a moderate increase in 1997. Nondurable goods are projected to grow at 6.3 percent in 1995, followed by some-

what lower growth in 1996 and 1997. Because expenditures on nondurable goods are substantially greater than those on durable goods, the stable growth of the total retail sales is not surprising. Declines in consumer spending on durables will be more than offset by a continued expansion in spending on nondurables. Chart 3 illustrates the magnitudes of spending on durable and nondurable goods.

in 1995 followed by a decline to 1.3 percent in 1996 and 1997. In contrast, nondurable manufacturing income is projected to grow only 1.7 percent in 1995, then quicken to 3.3 percent in 1996 and 3.5 percent in 1997. Since durable manufacturing is a larger portion of total Illinois manufacturing—approximately 12 percent versus nondurable at 8.6 percent—the decrease has a stronger effect on the growth of manufacturing as a whole.

Personal income in the services-producing sector is increasing steadily. Expansion in personal income is expected to be 2.9 percent in 1995 accompanied by an increase to 3.2 percent in 1996 and a decrease to 3 percent in 1997. The increase in growth is consistent with the forecast of total personal income for the state. Wholesale trade shows the most significant expansion in income with forecasts of 3.3 percent in 1995 and relatively large increases of 4.9 percent in 1996 and 4.5 percent in 1997. Increases in personal income are also projected for finance, insurance, and real estate. Expansions of 2.6 percent and 3.5 percent in 1995 and 1996, with an increase to 3.6 percent in 1997, are projected. Stability can be expected for the largest component of the services-

producing sector. Services are expected to grow 3.2 percent in 1995 with slight increases to 3.6 percent in 1996 and 3.4 percent in 1997. As this sector is 27.8 percent of the nonagricultural personal income in the state economy, it is not surprising that its growth displays the same steady behavior seen in the aggregate.

## Gross State Product

Real gross state product (GSP), the total inflation-adjusted value of all goods and services produced in Illinois, will expand 2.3 percent in 1995. Somewhat more rapid rates of expansion are forecast for the remainder of the forecast period. Goods-producing industries will expand 2.6 percent in 1995 followed by projections of 2 percent and 2.2 percent in 1996 and 1997. Durable manufacturing is expected to grow 2.8 percent in 1995 and then drop to 0.3 percent and 1.2 percent in 1996 and 1997, respectively. A 3.2 percent increase in services-producing industries is expected in 1995 followed by 3.5 percent in 1996 and 3.3 percent in 1997. The behavior of growth in GSP is similar in most major sectors of the economy. The forecast of GSP has not changed substantially from previous projections of the IEM.

## Conclusion

The Illinois economy will experience only moderate expansion in employment, personal income, and GSP. Such a forecast is consistent with the less optimistic forecasts we are starting to see for the national economy. The expansion of the services-producing sectors accompanied by relatively weak growth in goods-producing industries may be viewed as a continuation of the long-term shift in the underlying structure of the economy.

# Illinois Revenue Forecast

Continued growth of General Fund tax revenue is projected by the Illinois Econometric Model (IEM) of the Bureau for Economic and Business Research. An expansion of 5.5 percent is forecast for the fiscal year ending June 30, 1995, followed by a somewhat more moderate increase of 4.8 percent in 1996 (see Table 1a). The moderation in revenue growth reflects a slowdown in projected increases in nominal net personal income, net retail sales, and net miscellaneous tax revenue. A slight decline is forecast for net corporate income taxes in 1995, followed by a rebound in 1996.

Real net General Funds revenue is expected to expand 1.7 percent in 1995, then rise 2.0 percent in 1996. Real net General Funds revenue is adjusted to reflect the effects of projected inflation. Moderate growth is forecast for net

personal income, net retail sales and miscellaneous revenue sources. A sharp decline is forecast for net corporate income taxes in 1995 followed by an expansion of 2.7 percent in 1996.

*Table 1a. Net Tax Revenues by Major Sources in Millions of Current Dollars for Fiscal Years*

Dates	1990	1991	1992	1993	1994	1995	1996
Total Net General							
Funds Revenue	10,921	11,185	11,501	11,941	12,492	13,181	13,812
percent change	2.5	2.4	2.8	3.8	4.6	5.5	4.8
Net Personal Income	4,148	4,399	4,495	4,712	4,947	5,354	5,746
percent change	0.6	6.1	2.2	4.8	5.0	8.2	7.3
Net Retail Sales	3,818	3,873	4,021	4,156	4,360	4,556	4,680
percent change	4.4	1.5	3.8	3.4	4.9	4.5	2.7
Net Corporate Income	612	615	627	681	756	746	787
percent change	-15.1	0.5	1.8	8.7	11.0	-1.4	5.5
Miscellaneous	2,343	2,297	2,358	2,392	2,430	2,526	2,599
percent change	8.8	-2.0	2.7	1.4	1.6	3.9	2.9

*Table 1b. Net Tax Revenues by Major Sources in Millions of 1987 Dollars for Fiscal Years*

Dates	1990	1991	1992	1993	1994	1995	1996
Total Net General							
Funds Revenue	9,841	9,667	9,619	9,750	10,014	10,185	10,390
percent change	-1.8	-1.8	-0.5	1.4	2.7	1.7	2
Net Personal Income	3,734	3,799	3,757	3,846	3,965	4,136	4,322
percent change	-3.6	1.7	-1.1	2.3	3.1	4.3	4.5
Net Retail Sales	3,444	3,351	3,367	3,395	3,497	3,522	3,522
percent change	0.1	-2.7	0.5	0.9	3	0.7	0
Net Corporate Income	551	532	523	556	605	575	591
percent change	-18.6	-3.6	-1.5	6.1	9	-4.9	2.7
Miscellaneous	2,112	1,985	1,972	1,953	1,947	1,952	1,955
percent change	4.3	-6	-0.7	-1	-0.2	0.2	0.2

Source: BEBR General Funds Tax Revenue Forecast Model.

\*Note: General Funds Revenue for December 1994 was forecast as data was not available at this writing.

*Table 2. Fiscal Year Forecast Comparison, Winter 1995*

	IEFC <sup>a</sup>	BOB <sup>b</sup>	IEM	IGPA <sup>c</sup>	BOB/ IGPA/ IEFC Average	Difference between BEBR and Average
Individual	5,170	4,960	5,302	4,509	5,144	-635
Retail Sales	4,585	4,323	4,625	3,756	4,511	-755
Corporate	800	731	841	709	791	-82
Miscellaneous <sup>d</sup>	2,467	2,419	2,089	1,952	2,325	-373
Total Net Revenues	13,022	12,433	12,857	10,926	12,771	-1,845

<sup>a</sup> Source: IEFC, 1994 General Funds Revenue Report, April 1994.

<sup>b</sup> Source: November 1994 Quarterly Financial Report Estimates of General Funds Revenues Fiscal Year 1995, FY95 Budget Book Estimates, p. 5.

<sup>c</sup> Source: Illinois State Revenue Report and Forecast, January 1995.

<sup>d</sup> Miscellaneous includes lottery revenues, but does not include the \$45 million transfer expected by the IEFC, or \$25 anticipated by the BOB, from the Build Illinois Fund.

The forecasts of the IEM, the Illinois Economic and Fiscal Commission (IEFC), the Bureau of the Budget (BOB), and the Institute of Government and Public Affairs at the University of Illinois (IGPA) are unanimous in their projection of a decrease in expected General Funds Revenue. The decrease can be attributed to lowered expectations for the economy as a whole. The lower projection of the IEM may be the result of the forecasting techniques used in the model. Thus, even though the difference between the BEBR forecasts and the average of the IEFC, BOB, and IGPA forecasts is larger than it has been in the past, the forecasts are consistent with the expected performance of the economy as a whole.

# Forecast Statistics

## Illinois Employment (in thousands)

	1991	1992	1993	1994	1995	1996	1997
<b>Total Nonfarm Employment</b>	<b>5,222.5</b>	<b>5,226.2</b>	<b>5,308.2</b>	<b>5,404.2</b>	<b>5,497</b>	<b>5,568.6</b>	<b>5,640.4</b>
% change	-1.1	0.1	1.6	1.8	1.7	1.3	1.3
<b>Goods Producing Industries</b>	<b>1,155.6</b>	<b>1,125.4</b>	<b>1,139</b>	<b>1,157.2</b>	<b>1,186.2</b>	<b>1,199.5</b>	<b>1,208.8</b>
% change	-4.7	-2.6	1.2	1.6	2.5	1.1	0.8
Mining	18.5	17.4	15.3	14.9	13.9	13.9	13.9
% change	-6	-6.1	-11.8	-2.4	-6.9	0	-0.2
Construction	204.9	197	198.3	202.9	212.4	223.3	233.7
% change	-6.9	-3.9	0.7	2.4	4.7	5.1	4.7
Manufacturing	932.2	911.1	925.4	939.4	959.9	962.3	961.2
% change	-4.2	-2.3	1.6	1.5	2.2	0.2	-0.1
Durable Manufacturing	552.9	534.6	544.1	554.6	572.4	570.7	569.4
% change	-6.4	-3.3	1.8	1.9	3.2	-0.3	-0.2
Nondurable Manufacturing	379.3	376.5	381.3	384.8	387.6	391.6	391.8
% change	-0.9	-0.7	1.3	0.9	0.7	1	0.1
<b>Service Producing Industries</b>	<b>4,066.9</b>	<b>4,100.8</b>	<b>4,169.2</b>	<b>4,247</b>	<b>4,310.8</b>	<b>4,369.1</b>	<b>4,431.6</b>
% change	0	0.8	1.7	1.9	1.5	1.4	1.4
Transportation and Public Utilities	304.4	302.8	309.9	312.1	313	315	317.1
% change	-1.3	-0.5	2.3	0.7	0.3	0.6	0.7
Wholesale Trade	354.8	345.9	338.4	341.3	351.4	355.3	358.7
% change	-1.4	-2.5	-2.2	0.9	3	1.1	1
Retail Trade	892.7	889.8	906.1	934.3	950.5	957.1	967.8
% change	-1.2	-0.3	1.8	3.1	1.7	0.7	1.1
Finance, Insurance and Real Estate	377.5	378.4	382.1	386.8	386.8	388.2	390.1
% change	-0.4	0.2	1	1.2	0	0.4	0.5
Services	1,366.9	1,409.9	1,464.7	1,499.8	1,536.6	1,577	1,619.5
% change	1.4	3.1	3.9	2.4	2.5	2.6	2.7
Government	770.5	773.9	768.1	772.6	772.5	776.5	778.5
% change	0.6	0.4	-0.7	0.6	0	0.5	0.3

## Real Gross State Product (in millions of 1987 Dollars)

	1991	1992	1993	1994	1995	1996	1997
<b>Total Gross State Product</b>	<b>226,683</b>	<b>243,694</b>	<b>244,673</b>	<b>255,545</b>	<b>261,416</b>	<b>270,583</b>	<b>277,340</b>
% change	-4.2	7.5	0.4	4.4	2.3	3.5	2.5
<b>Goods Producing Industries</b>	<b>56,784</b>	<b>57,629</b>	<b>59,330</b>	<b>61,661</b>	<b>63,264</b>	<b>64,500</b>	<b>65,895</b>
% change	-3	1.5	3	3.9	2.6	2	2.2
Mining	1,290	1,257	1,128	1,063	974	925	889
% change	-3.4	-2.5	-10.3	-5.8	-8.4	-5	-3.9
Construction	10,092	10,025	10,219	10,461	10,765	11,103	11,311
% change	-7.9	-0.7	1.9	2.4	2.9	3.1	1.9
Manufacturing	45,402	46,346	47,983	50,138	51,525	52,472	53,695
% change	-1.8	2.1	3.5	4.5	2.8	1.8	2.3
Durable Manufacturing	22,871	23,015	23,772	25,129	25,823	25,909	26,222
% change	-5.4	0.6	3.3	5.7	2.8	0.3	1.2
Nondurable Manufacturing	22,531	23,331	24,211	25,009	25,702	26,563	27,473
% change	2.2	3.6	3.8	3.3	2.8	3.3	3.4
<b>Service Producing Industries</b>	<b>179,678</b>	<b>186,735</b>	<b>193,932</b>	<b>200,968</b>	<b>207,378</b>	<b>214,602</b>	<b>221,708</b>
% change	1.9	3.9	3.9	3.6	3.2	3.5	3.3
Transportation and Public Utilities	24,508	25,186	26,091	26,918	27,901	29,041	30,082
% change	1.4	2.8	3.6	3.2	3.7	4.1	3.6
Wholesale Trade	20,643	21,600	22,585	23,316	24,016	24,920	25,890
% change	4	4.6	4.6	3.2	3	3.8	3.9
Retail Trade	21,001	21,542	22,058	23,340	24,144	24,804	25,462
% change	-1.1	2.6	2.4	5.8	3.4	2.7	2.7
Finance, Insurance, and Real Estate	41,892	43,263	44,732	46,440	47,796	49,296	50,747
% change	1.2	3.3	3.4	3.8	2.9	3.1	2.9
Services	49,781	52,765	55,537	57,973	60,327	62,969	65,597
% change	3.1	6	5.3	4.4	4.1	4.4	4.2
Government	21,851	22,379	22,929	22,982	23,194	23,572	23,930
% change	1.9	2.4	2.5	0.2	0.9	1.6	1.5



# Forecast Statistics *(continued)*

## *Real Illinois Retail Sales (in millions of 1987 dollars)*

	1991	1992	1993	1994	1995	1996	1997
Total Retail Sales	78,023	77,044	77,562	78,369	79,793	81,449	83,010
% change	-1.3	-1.3	0.7	1.0	1.8	2.1	1.9
Durable Goods	26,463	27,834	29,945	31,569	30,035	29,255	29,359
% change	-6.9	5.2	7.6	5.4	-4.9	-2.6	0.4
Nondurable Goods	51,560	49,209	47,616	46,800	49,759	52,193	53,651
% change	1.9	-4.6	-3.2	-1.7	6.3	4.9	2.8

## *Real Personal Income (in millions of 1987 dollars)*

	1991	1992	1993	1994	1995	1996	1997
Total Personal Income	20,1719	20,8822	21,3912	22,0261	22,5591	232,730	239,198
% change	-1.0	3.5	2.4	3.0	2.4	3.2	2.8
Total Nonfarm Personal Income	14,7135	15,1885	15,5424	16,0241	164,648	169,478	174,079
% change	-0.6	3.2	2.3	3.1	2.8	2.9	2.7
Goods Producing Industries	39,495	39,950	40,707	42,470	43,653	44,627	45,535
% change	-4.3	1.2	1.9	4.3	2.8	2.2	2.0
Mining	808	786	670	656	594	576	558
% change	-3.6	-2.6	-14.8	-2.1	-9.5	-2.9	-3.1
Construction	8180	8,200	8,373	8,577	8,827	9,091	9,238
% change	-8.9	0.2	2.1	2.4	2.9	3	1.6
Manufacturing	30,507	30,964	31,664	33,237	34,232	34,960	35,739
% change	-3.0	1.5	2.3	5.0	3.0	2.1	2.2
Durable Manufacturing	17,850	17,775	18,357	19,388	20,141	20,404	20,667
% change	-5.2	-0.4	3.3	5.6	3.9	1.3	1.3
Nondurable Manufacturing	12,658	13,188	13,307	13,848	14,091	14,556	15,072
% change	0.0	4.2	0.9	4.1	1.7	3.3	3.5
Service Producing Industries	10,6926	11,1204	113,969	117,574	120,996	12,4852	128,544
% change	0.8	4.0	2.5	3.2	2.9	3.2	3.0
Transportation and Public Utilities	10,897	11,221	11,561	11,960	12,559	12,984	13,253
% change	-0.2	3.0	3.0	3.5	5.0	3.4	2.1
Wholesale Trade	12,008	12,131	11,926	11,866	12,258	12,864	13,444
% change	-1.3	1	-1.7	-0.5	3.3	4.9	4.5
Retail Trade	13,118	13,447	13,686	14,469	14,821	15,114	15,433
% change	-1.5	2.5	1.8	5.7	2.4	2.0	2.1
Finance, Insurance and Real Estate	12586	13,484	13,806	14,940	15,323	15,853	16,421
% change	2.0	7.1	2.4	8.2	2.6	3.5	3.6
Services	38,683	40,812	42,411	43,795	45,188	46,796	48,395
% change	1.2	5.5	3.9	3.3	3.2	3.6	3.4
Government	19,634	20,109	20,580	20,544	20,846	21,240	21,597
% change	2.6	2.4	2.3	-0.2	1.5	1.9	1.7

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## Contents

- 
- 3 *Illinois Exports*  
Michael V. Maciosek
- 
- 7 *The Potential Impact of the North American Free Trade Agreement  
on the Illinois Economy*  
Qiumei Yang
- 
- 10 *How DCCA Is Helping Illinois Businesses Go Global*  
Marcia Tjader
- 
- 13 *Wholesalers in International Franchising*  
Dixie S. Zietlow
- 
- 15 *Illinois Economic Forecast*  
Harvey B. Westbrook, Jr., and Qiumei Yang
- 
- 17 *Illinois Tax Revenue Forecast*  
Harvey B. Westbrook, Jr.
- 
- 18 *Forecast Statistics*

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Over the last two decades the combination of actively pro-trade presidential administrations and technological advances in communications and transportation have given US companies improved access to international markets. In the last two years, markets have been opened through the completion of the Uruguay round of the General Agreement on Tariffs and Trade and the signing of the North American Free Trade Agreement (NAFTA). More recently, talks covering both Pacific and North and South American trade areas have been started in order to provide even larger markets and new opportunities. On June 2, Secretary of State Warren Christopher proposed talks on an Atlantic trade area, to include the United States and the European Community, that could set the stage for continuously expanding markets through the next quarter century.

These developments are likely to benefit Illinois companies at least as much as companies in other states. Estimates based on state and national data indicate that manufacturing exports in Illinois grew nearly 90 percent between 1983 and 1993 after adjusting for inflation. In this article, the available data are used to outline patterns in Illinois exports and export-related employment and to identify the industries, companies, and employees in the Illinois economy most affected by

the opportunities presented by opening international markets. Illinois exporters have been participating in markets worldwide and in doing so have affected employment and income throughout the state economy. The data suggest that in some areas Illinois may not be taking full advantage of export opportunities. This fact, combined with freer world markets in the near future, provides the potential for Illinois exports to continue their rapid growth.

The data used in this article were taken from various editions of the *Illinois Statistical Abstract* (including the forthcoming 1995 edition). Section 16, "Exports and Export-Dependent Employment" provided the export data that are analyzed here using employment, gross state product, and price index data from other *Abstract* sections. (See the data note, p. 6.)

## Illinois Exporters

The 1987 Census of Manufactures indicates that 21 percent of Illinois manufacturing establishments export part of their product, compared with 18 percent for the United States as a whole. More than one-third of the firms in Electric

and Electronic Equipment, Transportation Equipment, and Instruments and Related Products are engaged in exporting.<sup>1</sup> These industries produce products such as appliances, audiovisual equipment, communications equipment, motor vehicles and parts, railroad equipment, medical instruments, and photographic equipment. Small firms play a significant role in exports—75 percent of the state's 3,651 exporting manufacturers employ fewer than 100 people.

Exports are spread widely across these firms. For firms for which information is available, 76 percent sell less than one-fifth of their product abroad, and less than 1 percent export more than one-half of their goods. More than one-third of exporting establishments export less than 1 percent of their total production.

## The Growing Importance of Exports

The recent history of real (inflation-adjusted) manufacturing and commodity exports is shown in Chart 1. Over this eight-year period, real manufacturing exports increased by 70 percent, and from 1989 to 1993 total real commodities exports

<sup>1</sup> Industry definitions correspond to Standard Industrial Classifications. 'Firm' or 'plant' is a reference to an operation at a single location (establishment) and not a reference to the entire operations of a company (which may have multiple establishments).

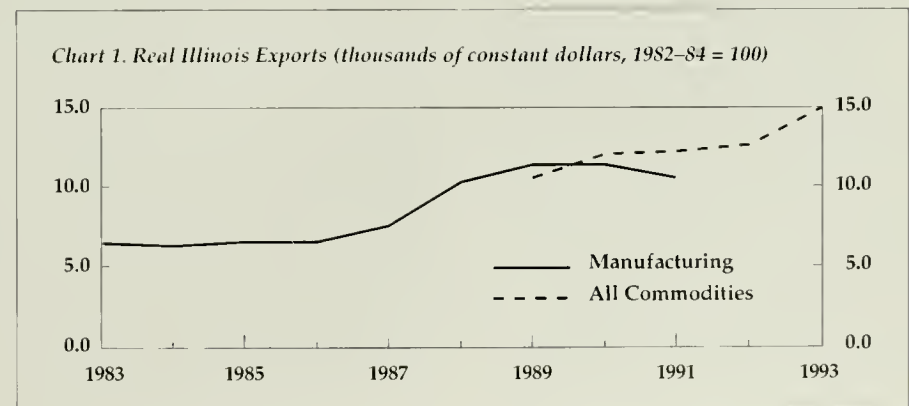


Chart 2. Manufacturing Exports' Share of Economic Activity (percent)

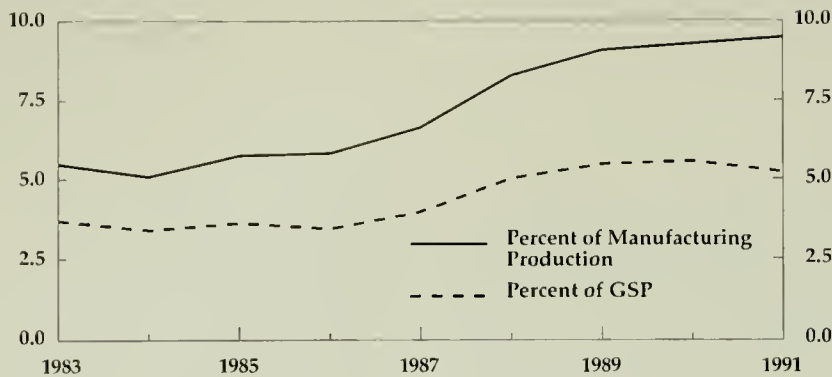


Chart 3. Illinois Employment Related to Manufacturing Exports (thousands)

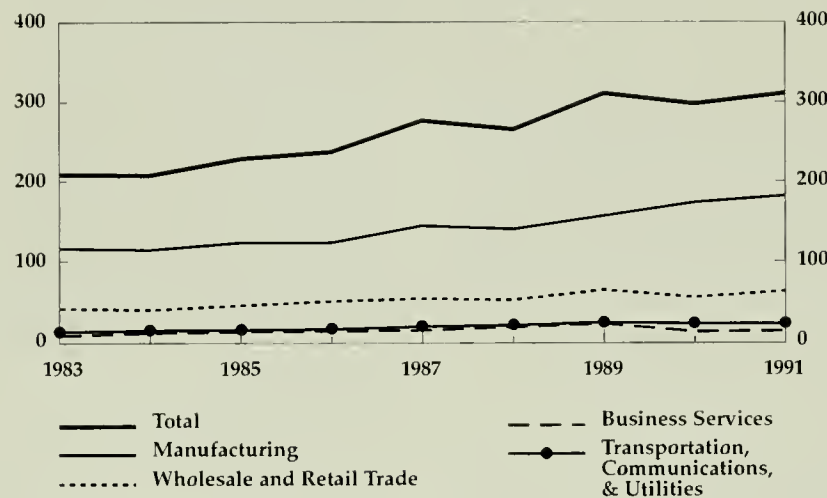
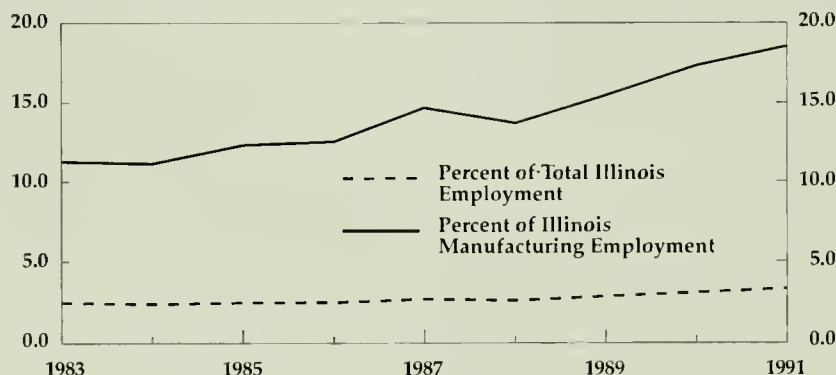


Chart 4. Illinois Employment Related to Manufacturing Exports as a Share of Employment Aggregates (percent)



(including manufactures and agricultural, mining, forestry, and other commodities) grew 43 percent.

Chart 2 shows the growing role of exports in the Illinois economy. From 1983 to 1991 manufacturing exports rose from 3.7 to 5.2 percent of Illinois gross state product (GSP), the measure of Illinois economy-wide production. Exports' share of Illinois manufacturing grew at a similar pace, from 5.4 percent in 1983 to 9.5 percent in 1991. Projecting this trend through 1993 would yield a near doubling of the share of manufacturing that is attributable to exports over the ten-year period beginning in 1983.

### Export-Related Employment

Exports are also becoming an important source of jobs in Illinois. Total employment related to manufacturing exports (that is, employment in the production of parts, supplies, and services purchased for use in export manufacturing) expanded 48 percent from 1983 to 1991 (Chart 3). There were 310,000 Illinois jobs tied to manufacturing exports in 1991, representing 5.4 percent of total employment. The largest contributor to export-related employment, manufacturing, went from 118,600 export-related jobs in 1983 to 181,900 in 1991. Over the same period, Illinois manufacturing employment *decreased* 4.7 percent. The growth in export employment combined with the decline in manufacturing employment has resulted in a swift rise in the proportion of manufacturing employment attributable to exports (from 11.6 to 18.6 percent) (see Chart 4).

### The Illinois Role in US Exports

Illinois GSP averaged about 4.8 percent of US Gross Domestic Product over the 1983-1993 period. On its face it might appear that the Illinois share of direct manufacturing exports, 4.6 percent, is about what might be expected (see Chart

5). However, in view of the fact that the state's share of US manufacturing is somewhat greater than its share of the overall economy (it averaged 5.5 percent between 1983 and 1991), it seems possible that Illinois manufacturing exports are below their potential level. This seems to be the case given that 9.5 percent of Illinois manufacturing was devoted to exports in 1991, compared with 11.1 percent for the United States as a whole.

The value of parts and supplies (not including services) used by export manufacturers began the period at more than 5.5 percent but has fallen consistently since. In 1983 the value of parts and supplies used by exporters was greater than direct exports, indicating that Illinois was a net supplier to export manufacturers in other states. However, the pattern reversed in 1988, and it appears that Illinois export manufacturers have become net purchasers.

The Illinois share of aggregate US employment has also averaged about 4.8 percent in recent years. In 1989 the Illinois share of US manufacturing employment related to direct exports reached this same level and remained there. Again, a more appropriate comparison may be the Illinois share of US manufacturing employment, which averaged 5.4 percent between 1983 and 1991.

The portion of Illinois employment related to the parts, supplies, and services used in export manufacturing equals the Illinois share of US manufacturing as a whole (Chart 6). In 1991, employment related to manufacturing exports (including supplies and services) was 18.6 percent for both Illinois and the United States, indicating that Illinois employment in the exporter supply network has been at a reasonable level.

### Important Industries

A few industries produce the bulk of Illinois exports. In 1991, Industrial Machinery and Equipment,

Chart 5. The Illinois Share of US Export Manufacturing (percent)

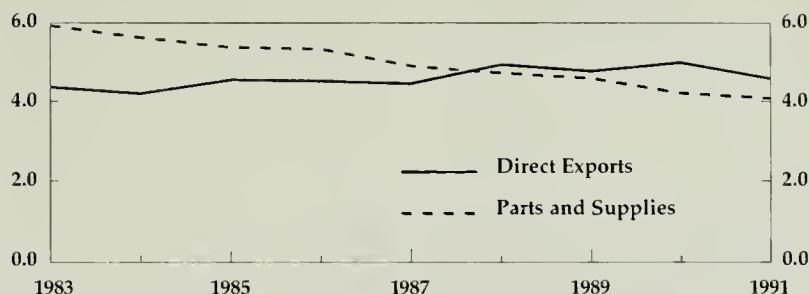
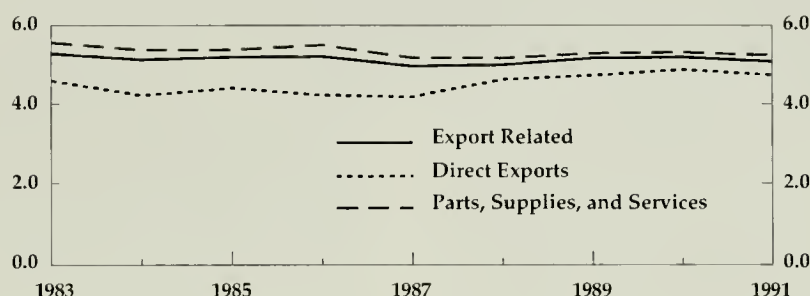


Chart 6. Illinois Employment as a Percent of US



Chemicals and Allied Products, and Electric and Electronic Equipment accounted for nearly 60 percent of Illinois direct manufacturing exports and 62 percent of employment related to direct exports. The figures on direct exports do not give an accurate picture of each sector's contribution. Establishments in one industry purchase parts and supplies from establishments in other industries, and the value of these parts and supplies is counted in the final export product, not as exports for the supplying firm. The Department of Commerce estimates that Primary Metal Industries make the largest contribution of parts and supplies to export manufacturers, and that Fabricated Metals Products, account for the most employment related to the manufacture of parts and supplies for exporters.

Within the broad industrial categories, a large portion of exports and related employment can be

attributed to a few, more narrowly defined industries. The largest, Construction and Related Machinery, accounts for 56 percent of the direct exports of Industrial Machinery and Equipment and provides 30 percent of the export-related employment in the sector. Similarly, Communications Equipment accounts for 47 percent of direct exports and 26 percent of export related employment in Electric and Electronic Equipment. Drugs are notable for constituting 46 percent of direct exports and 73 percent of direct export employment in Chemicals and Allied Products.

Problems with the data make it difficult to identify industries with fast export growth. Yearly estimates within an industry can vary substantially due to the signing or termination of major supply contracts, the startup or closing of large firms within an industry, and estimation problems. Thus, annual growth rates can be erratic, and

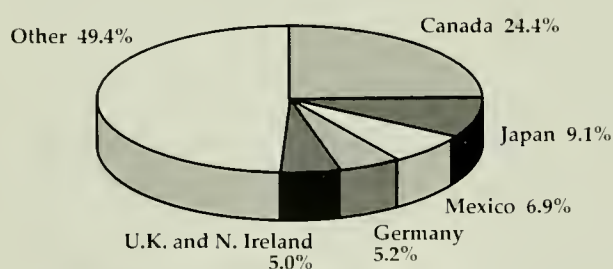


comparisons made over a period of years can vary greatly depending on the choice of the period's initial and final years. Nevertheless, it is possible to identify some strong industries such as Apparel and Other Textile Products, which registered the largest growth of any industry. The exports of Chemicals and Allied Products Industries and Printing and Publishing also grew consistently throughout the 1983–1991 period; and in more recent years, Rubber and Miscellaneous Plastic Products and Primary Metal Industries have been among the leaders.

### Important Trading Partners

Half of the export pie shown in Chart 7 is composed of exports to just five of the 224 nations that import Illinois goods. Thirty-one percent of Illinois exports are shipped to our NAFTA partners, Canada and Mexico. However, the rest of Illinois exports are spread more widely, with only 7 percent going to the rest of the Americas, 14 percent to western Europe and Scandinavia, and 22 percent to eastern Asia.

Chart 7. Illinois Exports by Importing Nation, 1993



Canada is the largest importer in virtually every industry. But there are exceptions. Japan is the largest importer of Illinois Agricultural Crops and Metal Mining products; Morocco is the largest importer of Coal; and the United Kingdom is the largest importer of Lumber and Wood Products.

We might expect Illinois exports in some industries to be limited by the economic structure and resources of our trading partners. Yet, surprisingly, Canada is the largest importer of Illinois Forestry commodities, Fishing, Hunting, and Trapping commodities, and Paper, and is the second largest importer of Illinois Lumber and Wood Products, despite Canada's relative strength in these industries. Mexico is the third largest importer of both Textile Mill Products and Apparel and Other Finished Products. Japan, in addition to being a primary importer of Illinois agricultural and mineral-based commodities, is the fourth largest importer of Industrial Machinery and Computer Equipment, the third largest importer of Electric and Electronic Equipment, and the second largest importer of Instruments and Related Products.

Surprisingly, the state's smaller trading partners are relatively large importers in some industries. Morocco and Brazil rank first and fifth in the importation of Illinois coal. Saudi Arabia is the seventh largest importer of Textile Mill Products,

and the twelfth largest importer of Petroleum Products. In Apparel and Other Finished Products, Costa Rica is tenth and Haiti is thirteenth; in Lumber and Wood Products, Poland is ninth and Hungary is

eleventh; and in Leather and Leather Products, the Dominican Republic is second and Thailand is fifth.

### Concluding Remarks

In short, while a large portion of Illinois exports are sent to a few countries, they do reach virtually

every nation on the globe. With perhaps 10 percent of Illinois GSP and employment tied to exports (including all commodities and services, and supplies and services related to exports), it is likely that more Illinois residents earn part of their paycheck in the markets of other countries than realize it. With exports becoming an increasingly important part of GSP and new US trade agreements on the table, it is likely that even more Illinois residents will be employed in export related jobs over the next quarter century.

### Data Note

The two primary data sources for this article are the US Department of Commerce, Bureau of the Census, and the Massachusetts Institute for Social and Economic Research (MISER). The Department of Commerce estimates are based on a survey of manufacturing establishments. These data tend to underestimate manufacturing exports because manufacturers only report the portion of their product that they export directly. Goods that are sold to intermediate parties may also be exported without the manufacturers' knowledge. The MISER data are based on Shipper's Export Declaration forms. Because these forms are incomplete, the MISER data need to be interpreted with caution. For example, exports that have been manufactured, mined, or grown in Iowa and temporarily warehoused in Illinois before being exported are likely to be counted as Illinois exports. Similarly, products originating from Illinois could be tabulated as exports of another state. On the destination end, exports from Illinois that are shipped to one nation according to the Shipper's Export Declaration form, may be subsequently shipped to another country without being noted on the form.

# The Potential Impact of the North American Free Trade Agreement on the Illinois Economy

On January 1, 1994, the United States, Canada, and Mexico signed the North American Free Trade Agreement (NAFTA), the first reciprocal free trade pact between developing and industrial countries. NAFTA promotes the liberalization of trade and investment in North America—a market even larger than that of the current European Union (EU).

By eliminating tariff and most nontariff barriers NAFTA will generate higher US exports to the growing Mexican market and consequently more US jobs. Illinois residents, however, are concerned about the potential impact of NAFTA on the state economy. These concerns have been heightened by the devaluation of the Mexican peso since December 1994, which further complicated discussions about how NAFTA will affect the American and Illinois economies.

NAFTA extends the provisions of the US and Canada Free Trade Agreement, signed in 1989, to include the Mexican economy. As a way to try to predict the potential impact of NAFTA on the Illinois

economy, I will examine how the US-Canada agreement has affected our state. Then I will offer views about how the introduction of Mexico into the equation might influence Illinois exports, income, and employment.

## US-Canada Free Trade and the Illinois Economy

After the implementation of the US-Canada agreement in 1989, Illinois exports to Canada have been growing steadily (Chart 1). Between 1987 and 1989 the annual average growth rate of Illinois exports to Canada was 13 percent. In 1990, the second year after UCFTA was enacted, Illinois exports to Canada jumped by 52.9 percent. Since then, exports from Illinois to Canada have exceeded \$5.0 billion every year, compared with \$3.4 billion in 1989.

Export-related businesses that have benefited most from US-Canada free trade are transportation equipment, industrial machinery and computers, electric and electronic equipment, fabricated and primary metals, and chemicals (Table 1). These industries create the highest paying jobs in Illinois. The Office of the US Trade Representative estimates that the average hourly wage of Illinois workers in 1991 was \$12.79 in chemical industries, \$13.44 in primary metal industries, \$13.56 in industry machinery and computers, and \$13.76 in

Table 1. Illinois Top 10 Exports to Canada, 1993  
(\$ thousands)

1. Indust. Machinery & Computer Equip.	1,788,023
2. Electronic and Electrical Equipment	727,323
3. Transportation Equipment	683,371
4. Chemicals and Allied Products	483,255
5. Food and Kindred Products	291,505
6. Fabricated Metal Products	275,293
7. Printing and Publishing	237,398
8. Rubber and Misc. Plastics Products	219,209
9. Primary Metal Industries	191,517
10. Instruments and Related Products	141,987

Source: Illinois Statistical Abstract, 1994.

transportation equipment, all above the \$11.68 average manufacturing wage.

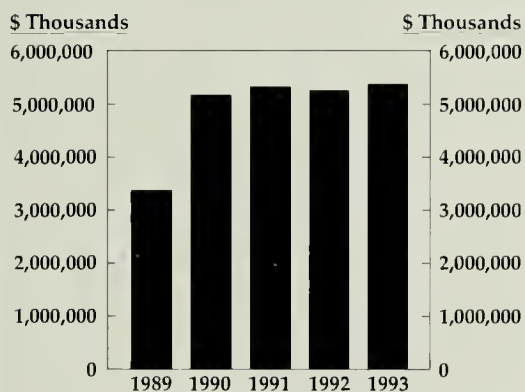
NAFTA expands the gains that Canada and the United States have already received from the earlier agreement. Nevertheless, NAFTA did not address the ongoing US-Canadian argument over Canadian wheat export subsidies. With the inclusion of Mexico, American and Canadian wheat farmers face intensified competition and continuing rounds of dispute.

## NAFTA and the Illinois Economy

Illinois exports to Mexico have grown markedly since 1989 (Chart 2). By 1991 Mexico became the third largest export market for Illinois behind Canada and Japan. In the same year, Illinois exports of manufactured goods to Mexico generated almost 24,500 jobs in the state. The major exports from Illinois to Mexico are the same ones that benefited the most from US-Canada free trade—industrial machinery and computers, transportation equipment, electric and electronic equipment, primary metals, and chemicals (Table 2).

The US Council of Mexico-US Business Committee has made comprehensive projections of the

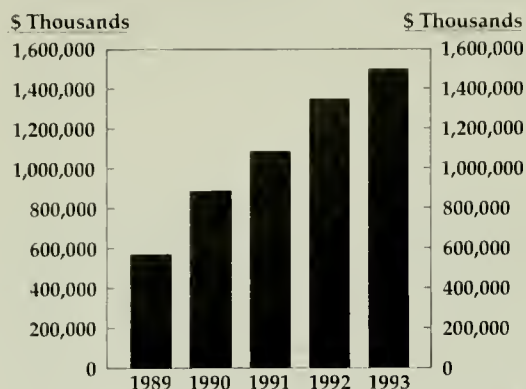
Chart 1. Illinois Exports to Canada: 1989-1993



Source: Illinois Statistical Abstract, 1994



Chart 2. Illinois Exports to Mexico: 1989-1993



Source: Illinois Statistical Abstract, 1994

potential impact of NAFTA on the Illinois economy (see the side bar, p. 9). Illinois exports of industrial goods and corn will benefit most from the opening up of the Mexican markets by NAFTA, and consequently employment in these industries is expected to increase. Illinois industries such as insurance, export/import services, and trucking will benefit from greater access to markets, intellectual property rights protection, and the relaxation of investment restrictions in Mexico.

While facilitating the increase of exports from the US to Mexico, NAFTA also lifts restrictions on various Mexican imports such as glassware, ceramic tile, and fruits and vegetables. This may increase competition to US producers. More important, labor interests argue that the low cost of Mexican labor will drive down the average wage

of American workers in general and cause jobs losses in the industries that produce competing goods.

Such an argument, however, ignores the fact that wages reflect worker productivity. The high worker productivity in the United States is brought about by skillful workers and high technology. "If wages were the only factor, many developing countries would be economic superpowers,"

commented US trade ambassador Carla Hills (cited in Gary Clyde Hufbauer and Jeffrey J. Schotz, *NAFTA: An Assessment*) in 1992. As a US commonwealth Puerto Rico has enjoyed free trade with the United States for decades, yet there still exists a considerable gap between US and Puerto Rican manufacturing wages. Furthermore, although trade between developing and developed countries has been increasing significantly, differences in living standards are still great.

It is true that the real wage for American workers has been growing modestly since the 1970s. But imports from low-wage countries may not be the cause. In most industrial countries manufacturing imports from the third world are only 3 percent of gross domestic product. The lower rates of American investment, in both human training and in physical capital, might have slowed the growth in the real wage.

Trade with developing countries causes the reallocation of labor from import-competitive industries to export industries and, thus, should have little impact on overall employment. Moreover,

such job-shifting will raise average wages in the United States. As the British weekly magazine the *Economist* put it (October 1, 1994), "Let China make toys, while America makes aircraft and pharmaceuticals."

The US government is quite aware of the potential consequences of NAFTA for American workers. Thus, the agreement allows considerable time for adjustment for American industries and workers that may be affected by imports from Canada and Mexico. Moreover, the US government has set up a special NAFTA labor adjustment program that includes US-Mexico cooperation, job training for displaced workers, and other provisions.

Finally, NAFTA will increase the Mexican capital stock by attracting more overseas investment into the country. A larger Mexican capital stock will create jobs and decrease the number of Mexican immigrants to the United States—a reduction of permanent Mexican immigration by at least 260,000 workers. This should benefit those lower-skilled Americans who compete in the job market with immigrant Mexicans.

## Peso Devaluation, a Potential Problem

On December 20, 1994, the Mexican government devalued the peso in response to large capital outflows. Foreign investors lost their confidence in the Mexican government's ability to manage a huge current account deficit that was financed by short-term foreign investment. Since then, the value of the peso has declined dramatically. It decreased from 3.5 per dollar before devaluation to 6.64 per dollar by March 18. Despite \$50 billion in "salvation" loans from the international financial world, including \$20 billion from the US Federal Reserve Bank, the response of the Mexican economy has not been promising. Eventually, however, the effect of the devaluation of the peso will depend both on the changes in

Table 2. Illinois Top 10 Exports to Mexico, 1993 (\$ thousands)

1. Indust. Machinery & Computer Equip.	404,059
2. Electronic and Electrical Equipment	188,627
3. Food and Kindred Products	121,755
4. Chemicals and Allied Products	94,111
5. Transportation Equipment	68,986
6. Primary Metal Industries	59,621
7. Fabricated Metal Products	46,167
8. Paper and Allied Products	34,382
9. Instruments and Related Products	32,767
10. Rubber and Misc. Plastics Products	27,163

Source: Illinois Statistical Abstract, 1994.



the exchange rate of the peso and the Mexican inflation rate.

The decline in the exchange rate of the peso could cut US exports to Mexico and increase US imports as Mexican goods become less expensive to Americans, and US-produced goods become relatively more expensive to the Mexicans.

If Mexican prices and wages increase at a similar rate in response to the drop of value in the peso, then we need not worry about the dampening effect that peso devaluation might create on US production. However, if the increase in the Mexican inflation rate falls behind the speed of the real devaluation of the peso, then the negative effect of peso devaluation on the sales of relatively more expensive US goods in Mexico will be the dominant force.

Before devaluation the inflation rate in Mexico was 7 percent. By mid-March, it had doubled to 14 percent. The rate of devaluation was relatively smaller. The fast

growth in the Mexican consumer prices could serve to modestly strengthen the competitiveness of US goods in Mexico.

The economic plan put forward by the Mexican government in January was designed to improve the Mexican current account balance by \$14 billion in 1995. According to the Federal Reserve Bank of San Francisco *Weekly Letter* (March 17, 1995), the realization of such a plan would reduce US gross domestic product by about 0.2 percent in 1995 if the \$14 billion improvement in the Mexican current account is created solely from a lower trade deficit and if trade with the US contributes to the bulk of this improvement.

The effect of the devaluation of the peso on the Illinois economy can then be roughly approximated by multiplying the US GDP by the portion of the Illinois Gross State Product that is accounted for by exports to Mexico. In 1993, Illinois total exports to Mexico was 0.5

percent of the gross state product. Thus, given a 0.2 percent overall US GDP effect, Illinois will expect a 0.1 percent drop in the gross state product in 1995 due to the devaluation of the Mexican peso.

## Conclusion

NAFTA will create jobs with higher income levels for Americans. With government action and well-organized job training programs, most low-skilled American workers displaced could expect a relatively easy job-shift from import-competitive to export industries.

The further liberalization in regional trade and investment brought by NAFTA is expected to have a positive effect on the Illinois economy, especially in export industries.

The recent Mexican peso devaluation, however, proposes a potential threat to the competitiveness of US production. A stable economy in Mexico is needed to assure that Illinois benefits from NAFTA.

# The Potential Impact of NAFTA on the Illinois Economy

## Exports

- \$45.7 million in additional exports to Mexico every year in the next ten years.
- Faster growth for top four export industries (non-electrical machinery, electronic equipment, chemicals, and transportation equipment), which currently account for 60 percent of total Illinois exports.
- More business for retailers and producers of medical equipment and supplies and industrial products such as auto parts, truck fleet, mining and construction equipment, and pollution control equipment and services.
- Four million tons of corn exports to Mexico every year once NAFTA is fully implemented (after ten years).

## Employment

- 10,300 new jobs over the next ten years.
- At the end of the 10-year transition period, increased employment mining, crude petroleum and natural gas, paper and allied products, printing and publishing, chemicals and allied products, petroleum and coal, rubber, leather and leather products, fabricated metal products, nonelectric machinery, transportation equipment, and miscellaneous manufacturing.

## Market Access

- Expanded market opportunities for Illinois manufacturing, transportation, insurance, construction and engineering, telecommunications equipment, and export/import service industries.

## Intellectual Property Rights Protection

- 20-year patent protection from the Mexican government. This will benefit Illinois pharmaceutical manufacturers.

## Investment Restriction

- Elimination of investment restrictions on international cargo trucking in Mexico. Illinois trucking companies will be allowed to use their own drivers and equipment for shipments into Mexico.
- Guaranteed nondiscriminatory access to the Mexican public telephone network in 18 months after implementation.
- Increased Mexican demand for services of Illinois construction and engineering firms, and financial, legal, and brokerage services.
- Illinois firms operating in Mexico will receive the same legal treatment as Mexican firms.

Source: The US Council of Mexico-US Business Committee

## How DCCA Is Helping Illinois Businesses Go Global

International business is vital to creating jobs and economic growth in the United States and Illinois. The world market is four times larger than the US market, and the slowdown of US economic growth makes it even more important for local firms to investigate new markets. It can be argued that exports provide the best way for the US and Illinois economies to grow and prosper. Since 1986, exports alone accounted for over 40 percent of US economic growth. Between 1989 and 1994 Illinois exports doubled from \$13.2 billion to \$26.4 billion.<sup>1</sup> From 1993 to 1994 the total dollar value of Illinois exports in 1994 increased 20.2 percent, nearly double the 10.2 percent increase in the United States as a whole. According to the Center for Economic Competitiveness, SRI International, and DRI McGraw Hill, "International markets will provide the greatest opportunity for Illinois manufacturing-based industries in the 1990s." The positive impact of international trade on the Illinois economy is illustrated by the following statistics: direct and indirect exports sustain more than 615,000 Illinois jobs. Exports and foreign investment accounted for 854,000 jobs in 1992, or one in eight. In the manufacturing sector, one in four jobs is dependent on international trade.

Exports to NAFTA countries, Canada and Mexico, accounted for nearly one-third of 1994 Illinois

exports. Exports to Canada, the state's top trading partner, were up 17.6 percent over 1993 to a record \$6.3 billion. Trade with Mexico, which is Illinois' third largest trade partner, increased 37.7 percent over 1993 to a record \$2.1 billion.

In 1994, exports to Japan, Illinois' second-largest trading partner, were up 9.9 percent to \$2.2 billion. The state's other leading trade partners in 1994 include the United Kingdom (up 21.3 percent to \$1.3 billion), and Germany (up 11.5 percent to \$1.3 billion).

By industry, 1994 exports of industrial machinery and electronic and electrical equipment, including computers, accounted for 46.4 percent of all exports. Industrial machinery and computer equipment increased 21 percent; other electronic and electrical equipment showed a 26.3 percent increase. Other major exporting industries include chemicals and allied products (\$3.7 billion, up 20.3 percent), transportation equipment (\$1.9 billions, up 15.5 percent), agricultural production—crops (\$1.7 billion, up 33.5 percent), food and kindred products (\$1.4 billion, up 5.9 percent) and instruments (\$1.2 billion, up 22.2 percent).

Clearly, Illinois businesses have made impressive progress in exporting. Yet, the potential exists for increasing exports still more. Illinois' share of the total US manufacturing output is greater than its share of manufactured exports. To help Illinois companies to increase their share of exports and to compete and succeed in a global economy, the State of Illinois established the Department of Commerce and Community Affairs (DCCA). DCCA views exporting

from the firm's point of view and has set up programs that address the demands of every phase of exporting.

### Barriers to Export and Some Solutions

The greatest barriers preventing businesses from exporting their products are cost and the lack of information about how to go about it.

The following are some commonly expressed barriers to exporting, and DCCA's solutions:

#### ■ *Understanding the Foreign Market.*

Lack of market knowledge and perceived difficulty in exporting often prevent firms from exporting, so DCCA has developed a statewide network of International Trade Centers that provide individualized export assistance and counseling to Illinois manufacturers.

#### ■ *Locating Foreign Contacts and Trade Opportunities.*

Companies are often unaware of the programs and resources they can use to identify contacts and potential distribution channels in foreign markets. DCCA sponsors and coordinates international trade shows and missions; catalog shows; a trade lead program that disseminates trade leads through an automated trade lead matching computer program; and an extensive network of foreign trade offices to assist Illinois companies in their overseas marketing efforts.

#### ■ *Understanding Transportation and Customs Issues.*

Many firms, because they are overwhelmed by the amount of unfathomable paperwork involved in export transactions, fail to train

<sup>1</sup> Because they are based on different sources, the statistics cited in this article may differ from those in other articles in this issue.



staff adequately to deal with freight-forwarding, customs, and related issues. DCCA has formed the Illinois Export Alliance with companies whose fields of specialization range from management consulting to freight-forwarding. These firms provide pro bono information to new Illinois exporters on specific export questions and problems.

### **Identifying a Firm's Readiness to Export**

DCCA research shows that the greatest export potential lies with midsize businesses in industrial machinery, chemicals and plastics, electrical equipment, medical and scientific equipment products, and food processing. Another factor that determines a company's capacity to undertake export trade is the maturity of its export experience. Levels of a firm's export experience can be categorized as follows:

#### ■ **STAGE 1: New-to-Concept.**

Stage 1 companies are focused solely on domestic markets and have no current interest in exporting. Such companies need encouragement to convince them to get involved in exporting, as well as basic market intelligence and information on market opportunities. Support for the firm at Stage 1 is important to encourage more firms to participate in export markets.

#### ■ **STAGE 2: Export-Willing.**

Stage 2 companies show initial interest in exporting but need training to provide a basic understanding of the process as well as identify leads, agents, and distributors and understanding international banking procedures. Realistically, to be exporters, firms must have sufficient resources to

purchase material, produce the product, and market the goods abroad.

#### ■ **STAGE 3: Export-Ready.**

Stage 3 companies that have received initial training and now need step-by-step assistance into the export marketplace.

#### ■ **STAGE 4: New-to-Market.**

These companies have some export experience and seek to find new export markets for their products. These firms need specialized information related to new markets, sales contacts, or leads.

### **Doing Business in a Global Economy: DCCA's Export Strategy Matching Illinois' Strengths with Opportunities**

An international business strategy is comprised of several elements. First, an entity must understand the basic theory underlying international trade. Then it needs to research global market trends, and finally it must develop and deploy resources to implement the strategy. In designing an export strategy for Illinois businesses, DCCA has taken into consideration which of the global markets are large and growing and which are most open to imports. Illinois's global marketing areas are divided into three regions: Europe, Asia, and the

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*Direct and indirect  
exports sustain  
more than 615,000  
Illinois jobs.*

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Americas. Target markets are identified according to market demand and/or potential receptiveness to international targeted industries.

DCCA's export strategy, developed with the assistance of an international export strategy task force, focuses on matching Illinois's strengths with emerging export opportunities and working to build an international infrastructure rather than assisting individual companies.

DCCA has created the Illinois Coordinating Committee for Exports, which consists of more than 20 federal, state, and local government agencies and private organizations that promote exporting by Illinois firms. The committee coordinates the activities of its members to promote improved cooperation and avoid duplication of efforts.

To enhance export-related services for its members, DCCA also works with Illinois industry associations, chambers and industrial councils, along with export networks.

### **How DCCA's International Business Division Is Organized to Help Firms Export**

The State of Illinois has an established tradition of offering export assistance. Illinois was first among the states to demonstrate an effective commitment to help its business community prosper through increased exports. In 1965, DCCA established its International Business Division (IBD) to provide needed export assistance to Illinois companies. Today, Illinois provides a three-level export infrastructure comprised of local, state, and overseas export assistance (see sidebar on p. 12).



# *Assistance Available to Illinois Businesses Wanting to Export*

## **Local Export Assistance—Illinois International Trade Centers**

Established in 1989, International Trade Centers are funded by DCCA, the US Small Business Administration, and the host institution to provide one-stop shopping in international services to potential Illinois exporters. Centers provide individualized export assistance and counseling to Illinois manufacturers, use international market research to evaluate key overseas opportunities, maintain an extensive collection of international trade reference materials, provide access to DCCA and all federal and state export resources. They are strategically located throughout Illinois at:

- The North Business and Industrial Council in Chicago ■ College of DuPage in Glen Ellyn
- Bradley University in Peoria ■ Southern Illinois University at Edwardsville ■ University of Illinois at Urbana-Champaign.

## **The Chicago Office**

The Chicago office of the International Business Division is staffed by trade specialists with specific regional expertise. They provide assistance to companies with specific questions related to doing business in Europe, Asia, Canada, and Latin America. The Chicago staff also coordinates international trade shows and missions, catalog shows, trade lead program, and the Illinois Export Alliance.

## **International Trade Shows and Missions**

A proven way to develop foreign sales is through participation in international trade shows and missions. The International Business Division, together with its foreign offices, identifies specific foreign opportunities and matches these with key Illinois industries. DCCA's Chicago and foreign offices provide a full range of support services for both trade shows and missions, including preshow publicity, counseling, and coordinating follow-up.

DCCA promotes companies in advance of events by contacting buyers and distributors in host countries, planning buyer receptions, researching key distribution channels, and arranging appointments with potential customers. DCCA also handles logistics and trouble-shooting for trade shows.

Trade missions offer opportunities for new market contacts. DCCA arranges individual appointments for groups of Illinois businesses with potential agents, distributors, and government officials to suit the needs of the business groups and the marketplace.

## **Catalog Shows**

Catalog shows, in which the products of targeted Illinois companies are featured via catalog presentations, are a cost-effective means of gaining market exposure with foreign agents and distributors interested in representing US manufacturers. Each year, the foreign offices plan a series of catalog shows, each focusing on a specific geographic region and featuring products with high market potential in that area.

## **Trade Lead Program**

Trade leads disseminated through DCCA's Chicago and foreign offices are made available to Illinois businesses through the automated trade lead matching computer program. The agency uses databases provided by the US Department of Commerce and other sources to help companies identify trade leads. In addition, DCCA also tracks foreign export and co-venturing opportunities and develops export networks to assist Illinois companies in improving their opportunities.

## **Illinois Export Alliance**

DCCA's International Business Division has formed an alliance with various companies whose fields of specialization range from management consulting to freight-forwarding. These companies provide pro bono information to new Illinois exporters on specific questions and problems in exporting products.

## **Overseas Export Assistance - Foreign Trade Offices**

Foreign trade offices provide a competitive edge for Illinois firms pursuing export markets, and can identify export opportunities, trade leads and business partners in targeted industries; assist trade associations/export networks in planning and executing trade missions and participation in trade shows; provide information on key markets and applicable product standards; provide introductions to key business contacts, potential agents and distributors, maintain and update databases of agents and distributors in key markets and industries, serve as a liaison with appropriate US and foreign commercial service posts. DCCA's International Business Division maintains an extensive network of foreign offices to assist Illinois companies in their overseas marketing efforts. They are located in, Brussels, Mexico City, Budapest, Tokyo, Warsaw, and Hong Kong.

# Wholesalers in International Franchising

In 1987, franchised business sales reached \$591 billion or 33 percent of all retail sales in the United States. International franchising by US franchisors is also experiencing rapid growth. According to a recent report, "almost 50 percent of US franchisors without foreign units plan to grow internationally, and 93 percent of the franchise operations that have already expanded abroad plan to increase their presence overseas." (*Chain Store Age Executive*, 68 (2), 70). In the early 1990s, Illinois-based McDonald's Corporation had already derived \$6 billion in sales (or 35 percent of their systemwide sales) from international markets.

The international expansion of US franchise systems is fascinating because of the variety of ways franchisors enter foreign markets. Occasionally they establish a company-owned retail unit directly from the US headquarters (see the Chart, Case A). Or, more commonly, the US franchisor sets up franchisees directly from US headquarters who act as owner-operators in the foreign market (Chart, case A). US franchisors also frequently establish wholesalers or middlemen with the responsibility of developing retail units. There are four ways that US franchisors expand into foreign markets via a wholesaler.

## Area Development Agreement

Under an area development agreement, the US-based franchisor grants an area developer the exclusive rights to develop a foreign territory and own the retail units (Chart, case B). Area development

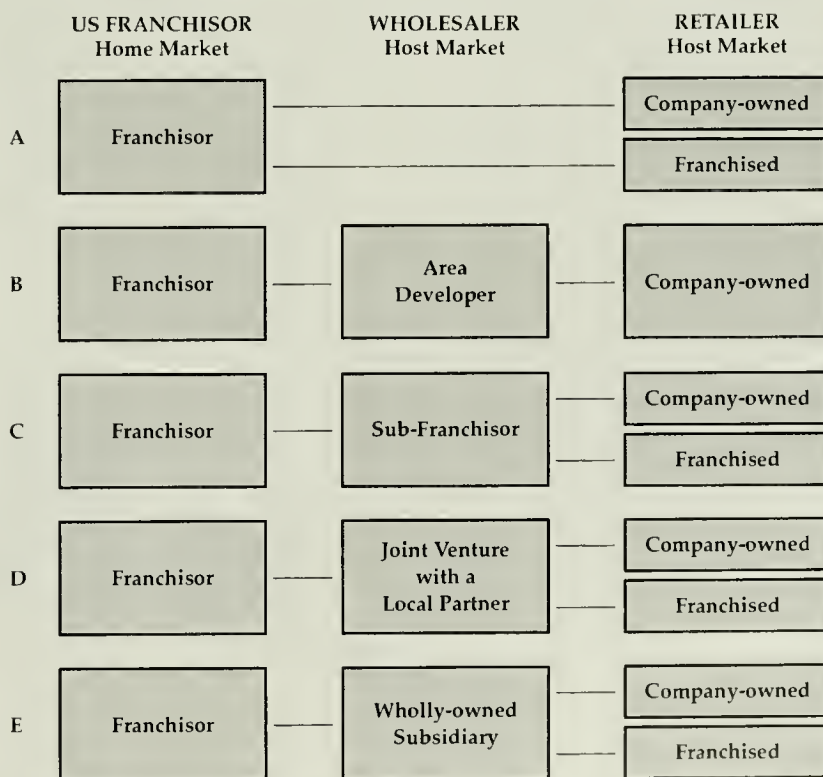
agreements allow the franchisor's system to grow rapidly while risk is shared with the area developer. One drawback of this agreement is that it is difficult to write a contract that specifies a sufficient number of retail units the area developer must open in a certain period of time. If the franchisor has modest expectations about the potential of the foreign market, the contract will specify only a moderate number of outlets. If the territory holds more potential than anticipated, the franchisor cannot then force the area developer to open more units than the contract specifies. In those circumstances, the franchisor's

system will not exploit the full potential of the foreign market.

## Master Franchise Agreement

In a master franchise agreement the US-based franchisor grants a sub-franchisor the exclusive rights to develop a foreign territory, owning some retail units and franchising others to third parties (Chart, case C). Such agreements create the opportunity for rapid development. And, the sub-franchisor typically increases the franchisor's knowledge of local conditions. Many franchisors object to these agreements because the sub-franchisor gains too much control

Chart 1. International Franchise Distribution Alternatives





over the franchise system in the foreign market. The franchisor must entrust the enforcement of quality control provisions in the unit franchise agreement to the sub-franchisor. If the sub-franchisor fails to enforce the franchisor's standards on the sub-franchisees, the quality of the franchise system will be reduced.

### Joint Venture

In a joint venture arrangement, the US headquarters finds a partner to share an equity investment in the foreign market. The purpose of the joint venture is to establish company-owned and/or franchised units in the host market and/or surrounding countries (see Chart, case D). Joint ventures allow the franchisor to maintain more control over the franchise system and to participate in decision-making. In addition, the joint venture partner frequently provides local knowledge. However, the franchisor must have a greater knowledge of the foreign market than would be necessary if they did not have ownership in the wholesaler. The joint venture also requires more capital than an area development or master franchise agreement.

### Wholly owned Subsidiary

Under this scheme, the US headquarters owns a subsidiary in a host country. The purpose of the subsidiary is to establish company-owned and/or franchised units in the host market and/or surrounding countries (Chart, Case E). These subsidiaries provide the franchisor with full control and management discretion. However, the franchisor

Table 1. Wholesalers Operated by US Franchisors in Foreign Markets\*

	TYPE OF WHOLESALE ARRANGEMENT			
	Area Development Agreement	Master Franchise Agreement	Joint Venture	Wholly Owned Subsidiary
<b>INDUSTRY</b>				
Food Service (30)	67	166	13	20
Motel/Hotel (5)	5	27	3	—
Business Services (3)	4	16	—	—

\*For 38 responding companies in the food service, motel/hotel, and business service industries with wholesalers established in international markets. This count excludes entries into US territories.

alone bears all the risks and expenses of establishing a presence overseas and trying to manage foreign workers.

### Frequency of Various Types of Wholesalers

To determine how frequently the various wholesale alternatives are used in foreign markets, I conducted a survey of all willing US franchisors<sup>1</sup> with international operations in the food service, motel/hotel, and business services industries. Each participating franchisor was asked to report which foreign market, or portion of foreign market, their company entered and how they entered it. Forty-three questionnaires were returned for a response rate of 40 percent.

Food service franchisors comprise the largest share of the sample with 30 responding companies (see the Table). The remainder of the sample is composed of five motel/hotel and three business service franchisors. For all three industries, the master franchise agreement is the most frequently used arrangement, followed by the area development agreement. In the business services industry,

none of the respondents reported using joint ventures or wholly owned subsidiaries in foreign markets and only three joint ventures were reported in the motel/hotel category. Franchisors in the food service industry clearly make the most investments in foreign markets with 20 wholly owned subsidiaries and 13 joint ventures. Despite the popular view that franchise companies expand their business primarily by recruiting franchisees, these results indicate that US franchisors frequently employ other and less direct alternatives when entering foreign markets. The predominance of the master franchise agreement could be explained by the large number of franchising companies new to international business who responded to the survey. These firms tend to have little international experience and fewer resources to allocate to global expansion. Since a subfranchisor has local cultural knowledge, financial resources, and business contacts in the host market, a master franchise agreement is the easiest way for a US franchisor to enter a foreign market.

<sup>1</sup>The franchise system must have originated in the United States to be included in the survey.



**R**obust expansion of the Illinois economy will continue through 1995, but the growth will slow in 1996 and 1997. The Illinois Econometric Model (IEM) forecasts indicate moderate growth of total nonagricultural employment and steady expansion of total personal income and total gross state product through 1997. Personal income and the services-producing portion of gross state product will be instrumental in the expansion of the Illinois economy.

### Employment

Illinois employment growth will be strong through 1995 but modest in 1996 and 1997. Such a pattern follows the similar trend of national forecasts of 2.6 percent for 1995 and 1.6 percent and 1.7 percent for 1996 and 1997 (Chart 1), according to the WEFA Group—one of the leading forecasting agencies in the United States. Employment in the goods-producing industries is projected to be approximately 3 percent in 1995. This relatively large rate of expansion will be followed by a smaller

1 percent growth in the following two years. The IEM forecasts solid growth in the service-producing sector for the entire forecasting period.

Employment in the mining sub-sector of goods-producing is forecast to decline sharply in 1995 while the other sub-sectors will expect employment growth. The IEM projects a 25 percent decrease in employment in the mining sub-sector in 1995, followed by a decline of 8.2 percent in 1996 and stabilizing in 1997. The drop in mining employment may be the result of an industry-wide contraction, which also explains the sharp decline in the forecasts of personal income and gross state product for 1995 in the mining sub-sector. After a few rather lackluster years, employment in the construction sub-sector is forecast to increase at a very strong 6 percent in 1995 and between 4 percent and 5 percent for the rest of the forecast period. By 1996 this expansion will increase employment in construction beyond the level attained in 1990.

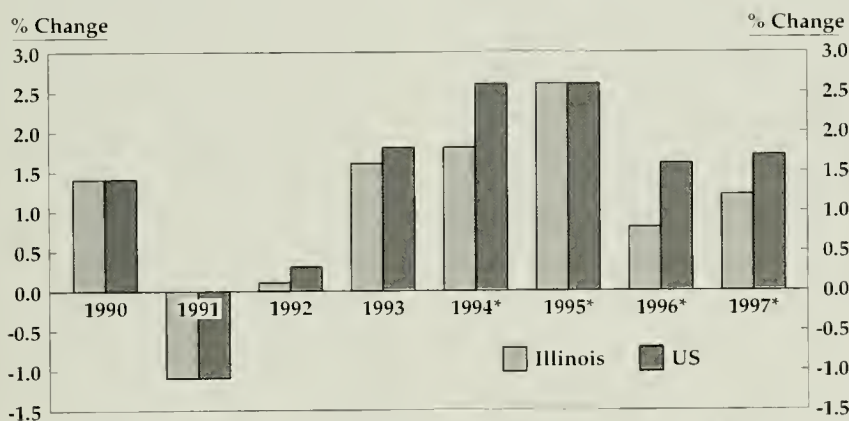
Manufacturing is the single largest sub-sector of the goods-producing sector and, thus, plays a significant role in the strength of employment in that sector of the Illinois economy. Durable manufacturing employment is projected to expand 4.1 percent in 1995. After 1995, the IEM projects weaker employment in manufacturing as expansion in both the durable and nondurable goods sectors will be less than 1 percent for 1996 and 1997.

The IEM projects that employment in service-producing industries will grow by 2.5 percent in 1995 and by approximately 1 percent for both 1996 and 1997. Because the service sector accounts for nearly four-fifths of total nonagricultural employment, steady employment in this sector is the source of the stable employment of the state's economy.

The IEM projection for employment in wholesale trade in 1995 reflects the same trend as previously reported—solid expansion in 1995 at 3.3 percent followed by slower growth of around 1 percent over the rest of the forecast period. Retail employment is anticipated to expand by 3 percent in 1995, and then taper off to 0.3 and 0.9 percent in 1996 and 1997, respectively.

The services sub-sector is a catch-all category of the service-producing sector that includes services related to health, business, law, engineering, management, and such. Employment in this, the largest sub-sector of the Illinois economy, is expected to expand 3.9 percent in 1995 and then slow to growth of over 2 percent in 1996 and 1997. The relative size of this sub-sector, over one-fourth of the Illinois nonfarm economy and over

Chart 1. US and Illinois Employment Growth



\*Forecasts

Source: The WEFA Group; BEBR, Illinois Econometric Model estimates

one-third of the services-producing sector, means that the expansion of the sub-sector has a strong positive influence on the overall level of employment in Illinois. Employment in the government sub-sector is expected to remain approximately constant over the forecast period—as it has for the past several years.

## Personal Income

The IEM projects the real total personal income, adjusted for inflation, will expand 3.5 percent in 1995, 3.7 percent in 1996, and 3.4 percent in 1997. The current projections are stronger than those reported in previous IEM forecasts.

Both the goods-producing and services-producing sectors of the economy will experience stable growth of personal income. The IEM projects 4.5 percent increase in personal income in the goods-producing sector for 1995 and 2.6 and 3 percent, respectively, for 1996 and 1997. Personal income in the mining sub-sector is expected to decline by 20.9 percent in 1995 and then by 8 percent and 1.2 percent in 1996 and 1997. The decrease in personal income in this sub-sector is consistent with the projections made for employment and gross state product. Personal income in the manufacturing sub-sector is projected to increase by approximately 5 percent in 1995, and then growth should moderate to 3 percent in 1996 and 1997. Much of the anticipated gains in personal income in manufacturing can be traced to the relatively strong growth in durable manufacturing in 1995.

Personal income in the service-producing sector of the economy is expected to increase by 4.4 percent in 1995 and by more than 3.3 percent in 1996 and 1997. These rates for 1996 and 1997 are slightly higher than those for goods-producing industries (Chart 2). The service sector accounts for over half of the total personal income in the Illinois economy. A significant expansion

Chart 2. Illinois Real Personal Income Growth

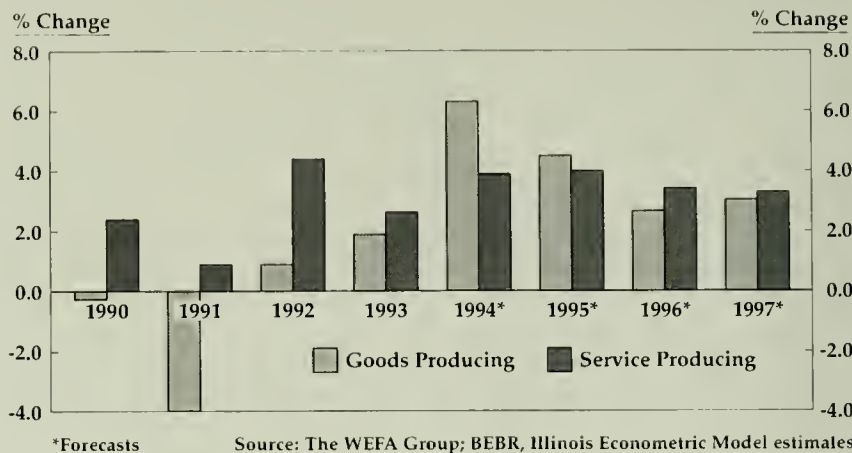
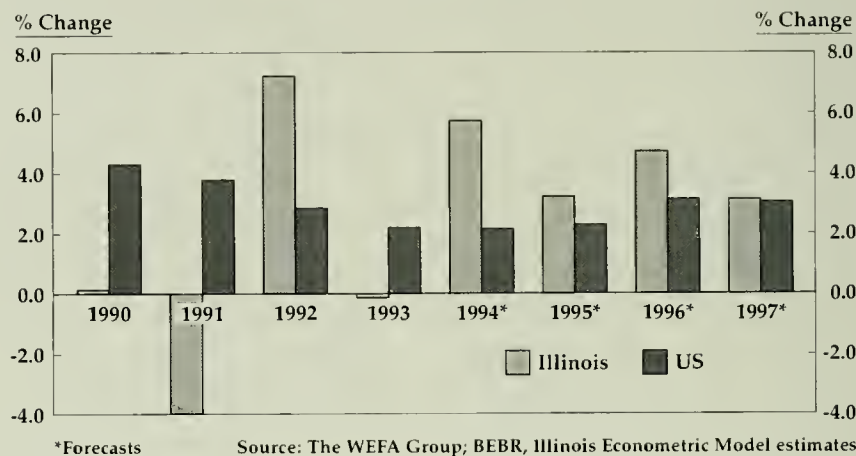


Chart 3. US Real GDP and Illinois Real GSP Growth



is projected for personal income in the transportation and public utilities sub-sector with an increase of over 8.5 percent in 1995 and over 5 percent for 1996 and 1997. Wholesale trade is expected to grow 4.1 percent in 1995 and then stabilize at about 3.5 percent in 1996 and 1997. The pattern is similar for retail trade, with growth projected at about 4.9 percent in 1995 followed by moderation to about 3.6 percent for 1996 and 1997. Strong growth is expected for personal income in the services sub-sector. In 1995, a 4.2 percent expansion in personal income is projected in services, followed by 3.7 percent and 4 percent in 1996 and 1997. Personal income earned in

government is expected to increase by approximately 2 percent over the entire forecast period.

## Gross State Product

Real gross state product (GSP), the total inflation-adjusted value of all goods and services produced in Illinois, will expand 3.2 percent in 1995. The previous forecast by the IEM predicted a lower rate of expansion. Growth in total GSP will be 4.7 percent in 1996 and 3.1 percent in 1997. Illinois gross state product will experience higher growth rates than will the nation's gross domestic product as projected by the WEFA Group (Chart 3). The pattern of growth in various

(continued on back page)

Steady growth of General Fund tax revenue is projected by the Illinois Econometric Model (IEM) of the Bureau for Economic and Business Research. A 4.8 percent increase in total net General Funds revenue, measured in current dollars, is forecast through the fiscal year ending June 30, 1997 (Table 1a). Although considerable expansion is expected in net personal income, we project a decrease in growth of net retail sales taxes. Slight increases are expected in the growth of net corporate income tax revenue and miscellaneous tax revenue.

Real total net General Funds revenue is expected to expand approximately 2.0 percent through fiscal year 1997. Real net General Funds revenue is measured in 1987 dollars adjusted to reflect the effects of projected inflation. Retail Sales, corporate income, and miscellaneous tax revenues are not expected to grow more than 1.5 percent over the forecast period. The IEM General Funds revenue projections are consistently lower than those made by the governor's Bureau of the Budget (BOB) and the legislature's Illinois Economic and Fiscal Commission (IEFC) (see Table 2).

Table 1a: Net Fiscal Year Tax Revenues by Major Sources, Spring 1995, Current Dollars\*

Dates	1991	1992	1993	1994	1995	1996	1997
Total Net General							
Funds Revenue	11,185	11,501	11,941	12,492	13,401	14,046	14,722
percent change	2.4	2.8	3.8	4.6	7.3	4.8	4.8
Net Personal Income	4,399	4,495	4,712	4,947	5,296	5,714	6,123
percent change	6.1	2.2	4.8	5	7.1	7.9	7.2
Net Retail Sales	3,873.0	4,021.0	4,156.0	4,360.0	4,628.0	4,785.0	4,905.0
percent change	1.5	3.8	3.4	4.9	6.2	3.4	2.5
Net Corporate Income	615.0	627.0	681.0	756.0	852.0	866.0	898.0
percent change	0.5	1.8	8.7	11.0	12.8	1.6	3.7
Miscellaneous	2,297	2,358	2,392	2,430	2,624	2,682	2,796
percent change	-2.0	2.7	1.4	1.6	8.0	2.2	4.3

Table 1.b: Net Fiscal Year Tax Revenues by Major Sources, Spring 1995, 1987 Dollars\*

Dates	1991	1992	1993	1994	1995	1996	1997
Total Net General							
Funds Revenue	9,667.0	9,619.0	9,750.0	10,014.0	10,517.0	10,755.0	10,973.0
percent change	-1.8	-0.5	1.4	2.7	5.0	2.3	2.0
Net Personal Income	3,799.0	3,757.0	3,846.0	3,965.0	4,156.0	4,374.0	4,562.0
percent change	1.7	-1.1	2.3	3.1	4.8	5.3	4.3
Net Retail Sales	3,351.0	3,367.0	3,395.0	3,497.0	3,634.0	3,666.0	3,658.0
percent change	-2.7	0.5	0.9	3.0	3.9	0.9	-0.2
Net Corporate Income	532.0	523.0	556.0	605.0	668.0	663.0	669.0
percent change	-3.6	-1.5	6.1	9.0	10.4	-0.8	0.9
Miscellaneous	1,985.0	1,972.0	1,953.0	1,947.0	2,059.0	2,053.0	2,084.0
percent change	-6.0	-0.7	-1.0	-0.2	5.7	-0.3	1.5

Source: BEBR General Funds Tax Revenue Forecast Model

Table 2: Fiscal Year Forecast Comparison, Spring 1995

	IEFC <sup>a</sup>	BOB <sup>b</sup>	IEM	BOB/IEFC Average	Difference between BEBR and Average
Individual	5,915	5,970	5,296	5,943	-647
Retail Sales	4,855	4,900	4,628	4,878	-698
Corporate	1,073	1,093	852	1,083	-57
Miscellaneous <sup>c</sup>	3,040	2,123	2,624	2,582	-491
Total Net Revenues	14,883	15,004	13,400	14,944	-1,802

<sup>a</sup> Source: IEFC, FY 1996 General Funds Revenue Report, March 1995.<sup>b</sup> Source: April 1995 Quarterly Financial Report. Estimates of General Funds Revenues Fiscal Year 1995, FY96 Book Estimates. p. 5.<sup>c</sup> Miscellaneous includes lottery revenues, but does not include the \$45 million transfer expected by the IEFC, or \$25 million anticipated by the BOB from the Build Illinois Fund.



# Forecast Statistics

## Illinois Employment (in thousands)

	1991	1992	1993	1994	1995	1996	1997
Total Nontarm Employment	5,222.7	5,226.5	5,308.4	5,405.5	5,546.8	5,592.3	5,657.0
% change	-1.1	0.1	1.6	1.8	2.6	0.8	1.2
Goods Producing Industries	1,155.7	1,125.5	1,139.1	1,149.0	1,181.9	1,194.1	1,208.8
% change	-4.7	-2.6	1.2	0.9	2.9	1.0	1.2
Mining	18.5	17.4	15.3	15.5	11.6	10.7	10.7
% change	-6.0	-6.1	-11.8	1.1	-24.7	-8.2	-0.4
Construction	204.9	196.9	198.2	203.2	215.4	223.9	234.3
% change	-6.9	-3.9	0.7	2.5	6.0	3.9	4.7
Manufacturing	932.3	911.2	925.5	930.3	954.9	959.5	963.9
% change	-4.2	-2.3	1.6	0.5	2.6	0.5	0.5
Durable Manufacturing	552.9	534.7	544.2	548.1	570.7	572.5	573.8
% change	-6.4	-3.3	1.8	0.7	4.1	0.3	0.2
Nondurable Manufacturing	379.3	376.5	381.4	382.2	384.1	387.0	390.0
% change	-0.9	-0.7	1.3	0.2	0.5	0.7	0.8
Service Producing Industries	4,067.0	4,100.9	4,169.4	4,256.5	4,364.8	4,398.2	4,448.1
% change	0.0	0.8	1.7	2.1	2.5	0.8	1.1
Transportation and Public Utilities	304.5	302.9	309.9	313.2	322.6	323.4	324.6
% change	-1.3	-0.5	2.3	1.1	3.0	0.3	0.4
Wholesale Trade	354.8	346.0	338.4	340.3	351.4	353.8	357.3
% change	-1.4	-2.5	-2.2	0.6	3.3	0.7	1.0
Retail Trade	892.7	889.8	906.1	935.6	955.4	958.6	967.2
% change	-1.2	-0.3	1.8	3.3	2.1	0.3	0.9
Finance, Insurance and Real Estate	377.5	378.4	382.1	387.5	393.2	390.7	388.7
% change	-0.4	0.2	1.0	1.4	1.5	-0.6	-0.5
Services	1,366.9	1,409.9	1,464.7	1,502.4	1,561.3	1,595.1	1,633.9
% change	1.4	3.1	3.9	2.6	3.9	2.2	2.4
Government	770.6	773.9	768.1	777.5	780.9	776.5	776.4
% change	0.6	0.4	-0.7	1.2	0.4	-0.6	0.0

## Real Personal Income (in millions of 1987 dollars)

	1991	1992	1993	1994	1995	1996	1997
Total Personal Income	201,915.0	208,872.0	213,421.0	221,679.0	229,393.0	237,989.0	246,185.0
% change	-0.9	3.4	2.2	3.9	3.5	3.7	3.4
Total Nonfarm Personal Income	147,306.0	152,366.0	156,085.0	163,124.0	168,998.0	174,372.0	180,003.0
% change	-0.5	3.4	2.4	4.5	3.6	3.2	3.2
Goods Producing Industries	39,597.0	39,935.0	40,702.0	43,248.0	45,199.0	46,379.0	47,758.0
% change	-4.0	0.9	1.9	6.3	4.5	2.6	3.0
Mining	821.0	801.0	681.0	725.0	573.0	527.0	521.0
% change	-2.1	-2.4	-15.1	6.5	-20.9	-8.0	-1.2
Construction	8,234.0	8,016.0	8,195.0	8,938.0	9,384.0	9,606.0	9,801.0
% change	-8.3	-2.6	2.2	9.1	5.0	2.4	2.0
Manufacturing	30,542.0	31,118.0	31,827.0	33,585.0	35,242.0	36,246.0	37,436.0
% change	-2.9	1.9	2.3	5.5	4.9	2.8	3.3
Durable Manufacturing	17,858.0	17,851.0	18,386.0	19,851.0	21,290.0	21,902.0	22,516.0
% change	-5.2	0.0	3.0	8.0	7.3	2.9	2.8
Nondurable Manufacturing	12,683.0	13,266.0	13,441.0	13,734.0	13,952.0	14,344.0	14,920.0
% change	0.6	4.6	1.3	2.2	1.6	2.8	4.0
Service Producing Industries	107,022.0	111,721.0	114,645.0	119,076.0	123,799.0	127,993.0	132,245.0
% change	0.9	4.4	2.6	3.9	4.0	3.4	3.3
Transportation and Public Utilities	10,897.0	11,268.0	11,677.0	12,260.0	13,281.0	14,076.0	14,745.0
% change	-0.2	3.4	3.6	5.0	8.3	6.0	4.7
Wholesale Trade	12,010.0	12,179.0	11,964.0	12,394.0	12,907.0	13,368.0	13,864.0
% change	-1.2	1.4	-1.8	3.6	4.1	3.6	3.7
Retail Trade	13,103.0	13,387.0	13,660.0	14,253.0	14,954.0	15,364.0	15,723.0
% change	-1.6	2.2	2.0	4.3	4.9	2.7	2.3
Finance, Insurance and Real Estate	12,612.0	13,916.0	14,294.0	15,092.0	15,316.0	15,760.0	16,184.0
% change	2.2	10.3	2.7	5.6	1.5	2.9	2.7
Services	38,706.0	40,733.0	42,419.0	44,172.0	46,014.0	47,717.0	49,636.0
% change	1.3	5.2	4.1	4.1	4.2	3.7	4.0
Government	19,693.0	20,238.0	20,631.0	20,904.0	21,327.0	21,708.0	22,092.0
% change	2.9	2.8	1.9	1.3	2.0	1.8	1.8

*Real Gross State Product (in millions of 1987 Dollars)*

	1991	1992	1993	1994	1995	1996	1997
<b>Total Gross State Product</b>	<b>227,143.0</b>	<b>243,560.0</b>	<b>243,431.0</b>	<b>257,612.0</b>	<b>265,918.0</b>	<b>278,307.0</b>	<b>287,030.0</b>
% change	-4.0	7.2	-0.1	5.8	3.2	4.7	3.1
<b>Goods Producing Industries</b>	<b>56,878.0</b>	<b>57,608.0</b>	<b>59,221.0</b>	<b>62,972.0</b>	<b>65,753.0</b>	<b>67,124.0</b>	<b>68,916.0</b>
% change	-2.8	1.3	2.8	6.3	4.4	2.1	2.7
<b>Mining</b>	<b>1,303.0</b>	<b>1,278.0</b>	<b>1,147.0</b>	<b>1,144.0</b>	<b>984.0</b>	<b>878.0</b>	<b>832.0</b>
% change	-2.4	-1.9	-10.2	-0.3	-13.9	-10.8	-5.2
<b>Construction</b>	<b>10,151.0</b>	<b>9,832.0</b>	<b>10,000.0</b>	<b>10,832.0</b>	<b>11,429.0</b>	<b>11,748.0</b>	<b>12,008.0</b>
% change	-7.4	-3.1	1.7	8.3	5.5	2.8	2.2
<b>Manufacturing</b>	<b>45,424.0</b>	<b>46,499.0</b>	<b>48,074.0</b>	<b>50,996.0</b>	<b>53,339.0</b>	<b>54,498.0</b>	<b>56,075.0</b>
% change	-1.8	2.4	3.4	6.1	4.6	2.2	2.9
<b>Durable Manufacturing</b>	<b>22,884.0</b>	<b>23,131.0</b>	<b>23,781.0</b>	<b>25,816.0</b>	<b>27,349.0</b>	<b>27,779.0</b>	<b>28,509.0</b>
% change	-5.4	1.1	2.8	8.6	5.9	1.6	2.6
<b>Nondurable Manufacturing</b>	<b>22,541.0</b>	<b>23,368.0</b>	<b>24,293.0</b>	<b>25,180.0</b>	<b>25,990.0</b>	<b>26,720.0</b>	<b>27,567.0</b>
% change	2.2	3.7	4.0	3.7	3.2	2.8	3.2
<b>Service Producing Industries</b>	<b>179,745.0</b>	<b>187,117.0</b>	<b>194,766.0</b>	<b>203,085.0</b>	<b>211,812.0</b>	<b>219,609.0</b>	<b>227,628.0</b>
% change	1.9	4.1	4.1	4.3	4.3	3.7	3.7
<b>Transportation and Public Utilities</b>	<b>24,508.0</b>	<b>25,220.0</b>	<b>26,199.0</b>	<b>27,345.0</b>	<b>28,908.0</b>	<b>30,545.0</b>	<b>32,267.0</b>
% change	1.4	2.9	3.9	4.4	5.7	5.7	5.6
<b>Wholesale Trade</b>	<b>20,644.0</b>	<b>21,613.0</b>	<b>22,607.0</b>	<b>23,628.0</b>	<b>24,681.0</b>	<b>25,661.0</b>	<b>26,701.0</b>
% change	4.0	4.7	4.6	4.5	4.5	4.0	4.1
<b>Retail Trade</b>	<b>20,979.0</b>	<b>21,449.0</b>	<b>22,003.0</b>	<b>23,022.0</b>	<b>24,291.0</b>	<b>25,169.0</b>	<b>25,928.0</b>
% change	-1.2	2.2	2.6	4.6	5.5	3.6	3.0
<b>Finance, Insurance and Real Estate</b>	<b>41,916.0</b>	<b>43,641.0</b>	<b>45,418.0</b>	<b>47,312.0</b>	<b>48,779.0</b>	<b>49,967.0</b>	<b>51,118.0</b>
% change	1.2	4.1	4.1	4.2	3.1	2.4	2.3
<b>Services</b>	<b>49,800.0</b>	<b>52,700.0</b>	<b>55,539.0</b>	<b>58,441.0</b>	<b>61,411.0</b>	<b>64,167.0</b>	<b>67,133.0</b>
% change	3.1	5.8	5.4	5.2	5.1	4.5	4.6
<b>Government</b>	<b>21,898.0</b>	<b>22,494.0</b>	<b>23,000.0</b>	<b>23,337.0</b>	<b>23,741.0</b>	<b>24,099.0</b>	<b>24,481.0</b>
% change	2.1	2.7	2.3	1.5	1.7	1.5	1.6

*Real Illinois Retail Sales (in millions of 1987 dollars)*

	1991	1992	1993	1994	1995	1996	1997
<b>Total Retail Sales</b>	<b>78,020.0</b>	<b>77,038.0</b>	<b>77,554.0</b>	<b>79,227.0</b>	<b>81,874.0</b>	<b>83,240.0</b>	<b>84,965.0</b>
% change	-1.3	-1.3	0.7	2.2	3.3	1.7	2.1
<b>Durable Goods</b>	<b>26,461.0</b>	<b>27,829.0</b>	<b>29,936.0</b>	<b>32,028.0</b>	<b>31,797.0</b>	<b>30,693.0</b>	<b>30,664.0</b>
% change	-6.9	5.2	7.6	7.0	-0.7	-3.5	-0.1
<b>Nondurable Goods</b>	<b>51,559.0</b>	<b>49,209.0</b>	<b>47,619.0</b>	<b>47,200.0</b>	<b>50,077.0</b>	<b>52,547.0</b>	<b>54,301.0</b>
% change	1.9	-4.6	-3.2	-0.9	6.1	4.9	3.3

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*(continued from page 16)*

sub-sectors of GSP is similar to that seen in employment and personal income. The goods-producing sector will expand 4.4 percent in 1995, followed by 2.1 percent growth in 1996 and 1997. Growth of the services-producing sector will be approximately 4 percent for the forecast period.

### **Consumer Spending**

Consumer spending, as measured by retail sales, is projected to expand

moderately. An increase of 3.3 percent is projected for 1995 followed by approximately 2 percent growth in 1996 and 1997. The increase is driven primarily by purchases of nondurable goods, since spending for durable goods is expected to decline. Retail sales in nondurable goods are expected to increase by 6.1 percent in 1995, followed by 4.9 percent and 3.3 percent in 1996 and 1997. Because nondurable goods account for two-thirds of total retail sales, stable growth in total retail sales is not surprising.

### **Conclusion**

Overall, the expansion of the Illinois economy will moderate slightly in 1996 and 1997 in terms of employment and retail sales. The projections of the IEM indicate that growth in most major sub-sectors of the economy will continue, but at a slower rate. Growth in personal income and GSP, however, will remain strong over the forecast period. The forecasts reflect the national trends projected by DRI/McGraw-Hill and the WEFA Group whose national data underlie the IEM.



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## Contents

- 
- 3 *Behind the Growth of Services*  
Michael V. Maciosek
- 
- 7 *Issues in Welfare Reform: Part I, Medicaid*  
Noreen M. Sugrue
- 
- 11 *The Economics of Pollution Reduction and Sulfur Dioxide Emissions Permits*  
David Gerard
- 
- 15 *Economic Forecasting and the Illinois Econometric Model*  
Harvey B. Westbrook, Jr.
- 
- 17 *Illinois Tax Revenues Remain Steady*  
Harvey B. Westbrook, Jr.
- 
- 18 *Forecast Statistics*

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# Behind the Growth of Services

The phenomenal growth of the nation's service industries is now well recognized. This expansion has occurred in both absolute terms and in relation to the rest of the economy (see Charts 1 and 2). In the 45 years between 1947 and 1992, services grew from 47 to 63 percent of gross domestic product (GDP). At the same time, manufacturing's share of GDP fell from 28 to 18 percent. During the same postwar period, manufacturing employment grew just 16 percent compared with 236 percent for services; and in the last 25 years, services employment doubled while manufacturing employment dropped 8.5 percent.

In a less frequently cited, but equally important, trend price levels for manufactured goods quadrupled between 1947 and 1992, while services prices increased tenfold (see Chart 3).<sup>1</sup> Although it appears from Chart 3 that services prices have exploded in the past few years, in fact, the rate of increase in the most recent ten years was similar to that of the first ten years shown. The chart gives the impression of a huge jump in the rate of increase because a relatively constant rate of inflation is being applied to higher service levels. However, the chart does clearly show the difference between

1947 and 1992 price levels for each of the sectors.

While in recent years the magnitude of these trends has become better recognized by policymakers and their constituents, the reasons behind the trends have not. Examining these reasons provides new perspectives on international trade issues, rising tuition costs, the expanding health sector, and the size of government.<sup>2</sup> Most notably, a review of the trends behind the growth of the service sector will yield a better understanding of what can and cannot be changed through government initiatives.

## Reasons for the Growth of Services

There are numerous explanations for the expanding scope of service industries. One possibility is that urbanization has led more households to purchase services outside the home. Similarly, it is thought that greater specialization of manufacturers has led firms to handle less of their own accounting, marketing, janitorial, and other services. In both of these cases, no more services

are necessarily being produced, rather services that were previously produced at home or inside manufacturing establishments are now contracted out and are only now being included in service sector statistics. Unfortunately, it is nearly impossible to measure these trends.

There are at least three other explanations that are believed to be farther reaching than the effects of specialization and that can be compared with readily available data. The most common has become

Chart 1a. Major Sectors as a Percent of GDP

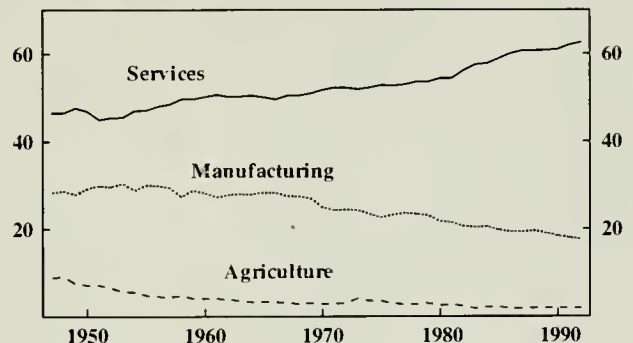
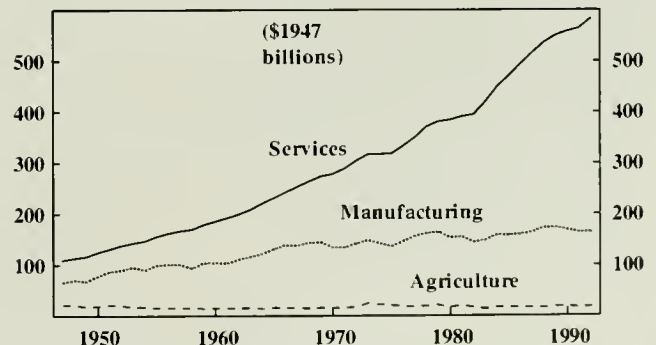


Chart 1b. GDP by Major Sectors Adjusted for Inflation Using GDP Implicit Price Deflator



Agriculture is not directly comparable to manufacturing and services due to differences in data collection methods. Services include transportation, communications, public utilities, wholesale trade, retail trade, finance, insurance, real estate, and other services, and do not include government.

<sup>1</sup> Services have not, however, exploded in recent years as much as the chart makes it appear. It gives that impression because a relatively constant rate of inflation is being applied to high price levels.

<sup>2</sup> Analysis similar to what is presented here can be found in Baumol, Blackman, and Wolff, *Productivity and American Leadership*, The MIT Press, 1989 and in Baumol, "Health Care, Education, and the Cost Disease: A Looming Crisis for Public Choice," *Public Choice*, Vol. 77, 1993.



known as the de-industrialization thesis, made popular in newsprint and political debates. According to frequent reports, the United States is falling behind the rest of the world in manufacturing. We are becoming uncompetitive in world markets and losing jobs to foreign competitors, especially to low-wage countries in the developing world. While this is the most commonly recognized explanation for the expansion of services, it was not the first to be developed.

As early as 1690 it was recognized that richer countries tend to produce more services and less agricultural and manufacturing goods than do poorer countries. Serious study of these patterns began in the 1930s and led to other explanations. According to the first of these, as people become richer they simply choose to spend a larger portion of their income on services than on manufactured

goods. A second alternative is that as the economy has advanced, services productivity has grown more slowly than agricultural and manufacturing productivity, and, therefore, services have experienced illusory growth.

While most explanations of services expansion focus on demand-side factors, the evidence indicates that the supply-side forces behind the productivity-based argument are the most consistent with GDP, employment, and inflation data. The other explanations are examined first in order to illustrate their consistency with the data.<sup>3</sup> They can explain the trends illustrated in Charts 1, 2, and 3, but are inconsistent with other facts.

## De-Industrialization

Foreign competition is frequently blamed for the plant closings reported periodically in the press. The

lower paragraphs of the news article, or the behind the event follow-up of the news broadcast, often sight the plant closing as yet another example of America's deteriorating industrial base. The simple fact, as stated, is that domestic producers simply cannot compete with cheap foreign labor, or perhaps, are unable to overcome the unfair trade practices of Company Y or Country Z.

This line of reasoning is consistent with

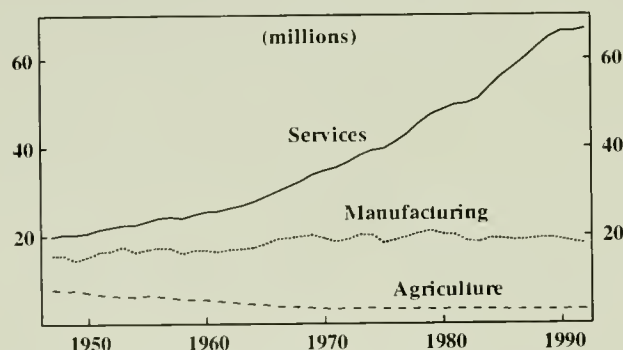
the basic facts shown in Charts 1, 2, and 3. It could be claimed that manufacturing's share of GDP is falling (and consequently services' share is rising) as imports replace domestic goods; that employment growth in manufacturing has lagged behind the rest of the economy as the work force has settled for jobs in the service sector; and that cheaper imports ease the price inflation of commodities but leave service prices unaffected.

However, since 1940, imports have exceeded exports five times, only to be surpassed by exports again. Imports have outpaced exports since 1982, and during this period blaming foreign competition for manufacturing's "decline" has become increasingly popular. Yet the service sector has grown faster than manufacturing year after year for decades. There is no clear correlation between the relative decline in manufacturing and US international trade accounts. In fact, US exports grew over 2,000 percent in real terms between 1947 and 1992. The growth of services has *coincided* with US firms' expansion in world markets.

Furthermore, the growth of services is not limited to the United States. Services have become a larger part of most economies of the Organization for Economic Cooperation and Development (OECD), including Japan, and in countries as diverse as Brazil, China, Ethiopia, Ghana, Panama, and South Korea.

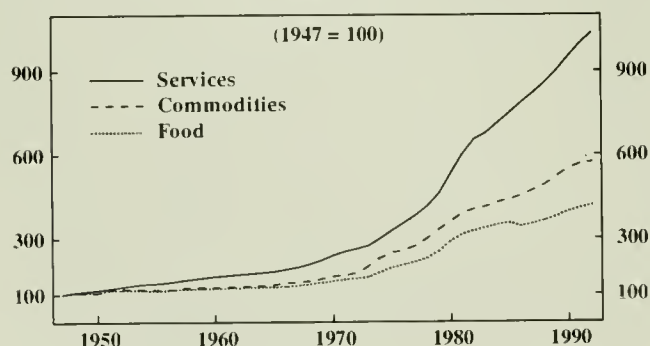
US manufacturing has also grown in absolute size (Chart 1b). It is simply that services have grown faster and taken a larger share of GDP. Additionally, the percent of the population in the paid labor force

Chart 2. Employment by Major Economic Sector



Services include transportation, communications, public utilities, wholesale trade, retail trade, finance, insurance, real estate, and other services, and do not include government.

Chart 3. CPI Corresponding to Major Economic Sectors



<sup>3</sup> While the data are examined in the broadly defined sectors of agriculture, manufacturing, and services, some services have grown very slowly and some have experienced great productivity gains. In addition, some activities, such as food processing, have characteristics common to all three sectors.

has grown more in the United States than in any other OECD country as more women have sought employment outside the home. Much of this expanding labor force has been absorbed by the service sector.

## Income Growth

The long-standing growth of services in the US economy and OECD countries has led to another postulate: the richer a country becomes, the larger the portion of its total income its citizens spend on services, and the smaller the portion they spend on manufactured goods. In fact, this scenario could describe modern economic history. Consider an economy initially dominated by an agricultural sector that provides enough food to maintain the society at some basic level. Then, increasing productivity in agriculture allows labor and savings to be transferred to industry without disrupting supplies of the basic nutritional needs of the population. At the same time, increased productivity results in larger incomes, less and less of which is needed to obtain the requisite agricultural produce. Resources are freed for use in industry, while extra income is generated and spent on increased consumption of manufactured goods. Even though agriculture does not shrink in absolute size, it begins to account for a smaller portion of economic activity.

The same process may transform the industrial economy to a service economy. Increases in industrial productivity free labor and capital for use in the service sector, and also provide extra income, an increasing portion of which is spent on services. Essentially, as productivity growth translates into extra income, consumers purchase goods and services that they denied themselves at lower incomes.

We see anecdotal evidence in people who now purchase services that were previously produced at home. It is believed that as people grow richer they will purchase more lawn care, haircuts, restaurant

meals, automotive repairs, and the like, perhaps because it makes economic sense to purchase such services and spend the time saved at their own occupation.

These considerations are also consistent with the data shown in Charts 1, 2, and 3. The growth of national income from productivity gains in manufacturing allows people to satisfy more of their desires for manufactured goods and move on to demand more services. The resulting shifts in demand cause relatively more services to be produced and more labor to be pulled into the service sector. Inflation in the service sector might be caused by the ever-growing demand for services combined with a slower transition of resources from manufacturing to services.

However, this reasoning does not hold up to a closer examination of the facts. The GDP data discussed so far have been adjusted for inflation using the same GDP price deflator for each of the sectors. A different picture of economic history is drawn when each sector is adjusted for inflation with its own Consumer Price Index (CPI) (for example, agriculture by the CPI for food). Accounting for inflation in this way gives a better measure of the actual quantity of goods or services produced in each sector. Compare the rising share of services and the falling share of manufacturing in Chart 1a with the more stable picture in Chart

Chart 4a. Major Sectors as a Percent of GDP, Adjusted by Individual CPIs

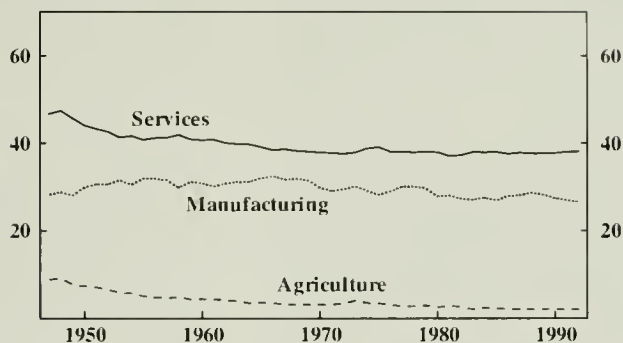
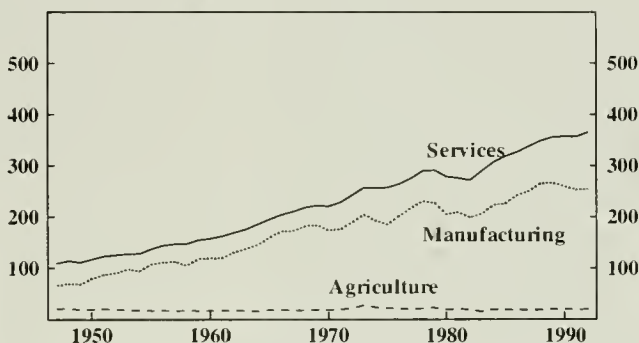


Chart 4b. GDP by Major Sector, Adjusted by Individual CPIs



4a; or the divergence of manufacturing and services in Chart 1b with their parallel growth in Chart 4b. Given these new estimates of the actual quantity produced in each sector, the apparent growth of services needs to be reexamined and the apparent stag-nancy of manufacturing dismissed.

It would seem that the relative growth of services is an illusion created by the need to spend a larger share of income on services in order to obtain the same amount relative to manufactured goods (given the increases in services prices). The claim that employees have been drawn into services industries by increased demand is no longer logical because the real volume of services has not increased relative to manufactured goods, and, therefore, no greater portion of the work force should have been necessary to produce them.



## Productivity Growth

A possible explanation of employment patterns can be found in a theory of "unbalanced growth" that is based on differing rates of productivity growth in manufacturing and services.

The basis of the unbalanced growth view is the belief that, compared with manufacturing, some services can achieve only slow productivity gains because they are inherently labor intensive. It may be easy to introduce new machinery that reduces the labor necessary to produce an automobile, but nearly impossible to speed up the time necessary to perform a piece of classical music, teach a math lesson, administer medical care, or resolve a court case.

It is argued that productivity increases in manufacturing cause manufacturing wages to grow without increasing costs because less labor is needed to produce the same amount of goods. However, services, which must compete with manufacturing plants for workers, must also offer higher salaries, without the ability to offset these higher costs with increased productivity. Therefore, service sector production costs, and subsequently prices, rise faster than those of manufacturing.

Unbalanced growth also incorporates an explanation for services' increasing share of employment. It is said that manufacturing employment can be expected to grow more slowly than does employment as a whole because new machinery and productivity gains allow the manufacturing sector to meet consumers' desires with less labor. As the economy expands, purchases of manufactured goods and services may grow

equally in real terms, and manufacturing employment may grow absolutely, but manufacturing employment will always grow more slowly than does services employment.

The productivity-growth explanation is probably the most consistent with the facts, yet it cannot completely rule out some role of growing incomes. The real share of services has remained relatively stable as per capita income has grown (Chart 4a). However, we normally expect that as the price of an item rises people will buy less of it. Given the faster increase in services prices, we would expect the quantity of services to fall relative to goods, not remain the same. A possible explanation for this discrepancy is that consumers *have* decided to buy more services with their greater income and that this tendency has been offset by rising service prices.

## Conclusions

Without more detailed analysis, a definitive explanation of the rise of services is not possible. In particular, it is not obvious that services must offer higher wages in response to manufacturing productivity increases, or that services productivity grows at a significantly slower pace than manufacturing productivity. However, the reasoning behind relative productivity growth is the most consistent with the data examined here, though income growth or some other balancing force must be maintaining service production levels despite higher prices. Errors in measurement, most notably the difficulty of measuring services output and quality changes, may also contribute to the puzzle.

In any case, it is clear that issues involving a specific service should not be analyzed outside the context of overall services growth. Growing tuition costs and medical care prices and the expansion of the legal system are not necessarily the fault of inefficiencies as we often hear; rather, they might be due to strong productivity growth of manufacturing and the resulting pressure on labor costs. Similarly, the expansion of government budgets is partially due to the rising cost of providing services and not necessarily to spendthrift politicians throwing money at pork-barrel projects. Even the portion of the federal budget that is spent on a large amount of manufactured goods, the defense budget, might be weighted down by growing costs of research and development services. It is possible that federal deficits are the result of providing the same level of services to voters who have not been willing to pay higher taxes because, as with most things, they demand less government services when prices rise.

In one sense, these conjectures are disheartening because they imply that policy-based reforms have a limited ability to change these trends. All the same, we need to recognize that nothing here implies that services are becoming less affordable. The root cause of the higher relative prices of some services may be due to higher productivity in manufacturing, which brings about higher real incomes. If anything, as a nation we have the ability to purchase a larger quantity of services — we simply do not like the price tags.



## Some Medicaid Facts

- Approximately 70 percent of Medicaid recipients are families with dependent children and they use about 31 percent of the resources.
- Approximately 8 percent of Medicaid recipients are elderly and they use about 19 percent of the resources.
- Approximately 18 percent of Medicaid recipients are disabled and they use about 48 percent of Medicaid resources.

This article is the first in a two-part series focusing on welfare reform. The first article focuses on Medicaid; the second on cash assistance/cash grants and housing allowances. The articles are not intended to offer a solution for welfare reform in Illinois. They provide information about who is on welfare and the benefits they receive, as well as examine some of the policy implications associated with welfare reform initiatives.

Throughout the United States there is a clamor for welfare reform. The demands include getting people off welfare and into jobs, controlling the costs of cash grants and Medicaid, and ensuring that only the deserving poor get benefits. Nobody denies that there are many problems with the current welfare system and that changes are needed. Rather, disagreements arise when discussions focus on the assumptions of what types of people are on welfare and why; what benefits welfare recipients ought to receive; and what can be done to curtail the "epidemic" of welfare dependency. Which policy options for welfare reform that one champions depends upon these assumptions as well as beliefs about how long recipients are on welfare, why they are on welfare, and what incentives are needed to remove them from the rolls.

Welfare has three components that require attention: Medicaid; cash assistance/cash grants (almost exclusively to aid families with dependent children); and housing allowances (assistance given to people so that they can live in public housing or other subsidized housing).

## Medicaid

Authorized under Title XIX of the Social Security Act, Medicaid is an entitlement program paid for by the states and the federal government and administered by the states to finance the costs associated with providing health care to low income (poor) persons. Although the program was designed for the poor, being poor is not an automatic qualification to receive Medicaid. According to the Congressional Research Office (1993), less than 50 percent of the nation's population with family incomes below the poverty line are covered by Medicaid. Only people who are poor and can be fit into other categories (for example, pregnant, blind, disabled, children under a certain age, elderly) are eligible for Medicaid. According to the more recent (1994) report of the Kaiser Commission, because of the dual qualification only 62 percent of Americans who are poor are covered by Medicaid. Of those covered, more than two-thirds are women of child-bearing age and children under the age of 18. The other major categories of Medicaid recipients are the elderly and the disabled.<sup>1</sup>

In Illinois, Medicaid costs are a major contributor to the state's budgetary woes. Medicaid costs continue to rise, and there appears to be little relief in sight. Medicaid was designed as a health care program

<sup>1</sup> Most of the elderly receiving Medicaid are in long-term care facilities. Many of the disabled who receive Medicaid do so while they are waiting to become eligible for Medicare. In the case of certain disabilities, people may be enrolled in the Medicare program within a few years of their disability being diagnosed, but until then, they are dependent on Medicaid.

**Table 1. Illinois Medicaid Expenditures (% distributions) by Category of Assistance, Selected Fiscal Years, 1983–1994**

Category of Assistance	Fiscal Year						
	1983	1985	1987	1989	1991	1993	1994
Elderly	19.1	18.0	17.2	18.9	19.1	18.9	18.9
Disabled	39.1	41.5	42.5	45.8	44.7	47.2	47.5
Families with Dependent Children	31.9	32.8	31.4	27.8	28.6	31.0	30.5
Other <sup>a</sup>	9.9	7.7	9.1	7.4	7.6	2.9	3.3

Source: Center for Urban Research and Policy Studies, University of Chicago, 1995.

<sup>a</sup> One reason for the drop in the other category is, in all likelihood, the dropping of general assistance for the welfare option. General assistance was the assistance that went to the poor (single men, women without children) who did not fit into the other categories.

**Table 2. Illinois Medicaid Enrollment (% distribution), 1983, 1987, and 1994**

Category of Assistance	1983	1987	1994
Families with Dependent Children	69.2	66.8	70.3
Elderly	6.3	6.4	7.6
Disabled	10.1	12.9	17.58
Other <sup>a</sup>	14.3	13.8	4.6

Source: Center for Urban Research and Policy Studies, University of Chicago, 1995.

<sup>a</sup> The reason for the significant decrease in the other category is the decrease in and then elimination of funding for people receiving general assistance.

**Table 3. Illinois Medicaid Expenditures (% distributions) of Assistance and Type of Provider, FY1993**

Provider	Category of Assistance		
	Families	Disabled	Elderly
Long-Term Care	0.2	40.4	80.9
Hospitals	66.6	39.5	7.6
Physicians	13.6	3.9	0.6
Prescribed Drugs	5.0	6.8	7.5
HMOs	8.5	0.0	0.0
Other	6.1	9.4	3.3

Source: Center for Urban Research and Policy Studies, University of Chicago, 1995.

<sup>2</sup> What is not known is what percent of the hospital care for families with dependent children is for emergency room use. It is known that poorer families are more likely to use hospital emergency rooms for routine care than are wealthier families.

Over the period 1983–1994, the percent of expenditures for families with dependent children has remained stable, as have the percent of total Medicaid expenditures spent on the elderly (see Table 1). The big increases have come due to expenditures on the disabled. In 1983, approximately 39 percent of Illinois Medicaid expenditures went to the disabled, but by 1994 that figure was about 48 percent. The allocation of resources is only one part of the story. The distribution of enrollees is another. Between 1983 and 1994, the percent of Medicaid recipients classified as families with dependent children has also remained relatively stable. The same is true for the elderly (see Table 2). The percent of enrollees who are disabled has substantially increased.

In 1994, approximately 35 percent of enrollees—the elderly and the disabled—used about two thirds of Illinois Medicaid dollars. While at the same time approximately 70 percent of enrollees—families with dependent children—used about 31 percent of the state's Medicaid dollars. These patterns indicate that poor women and children are using a fairly small amount of Medicaid dollars, relative to their percent of the total Medicaid population, and that the elderly and the disabled are using a significant amount of the total Medicaid resources relative to their percent of the total.

Most of the Medicaid dollars spent on the elderly go for long-term care, most spent on the disabled tends to be for long-term care as well as hospital stays, and the money spent on women and children is for hospital care and physicians. (See Table 3) About two-thirds of Medicaid dollars spent on families is for hospital care.<sup>2</sup> Approximately 19 percent of resources spent on families is for physicians and prescription drugs. About 81 percent of Medicaid dollars spent on

for the poor. Today many political leaders and ordinary citizens believe that Medicaid is universal health care coverage for the poor. They also believe that Medicaid is as costly as it is because of what is spent on families with dependent children. Such beliefs are incorrect.

A great deal of money is being spent on the Medicaid program. Before engaging in any serious policy discussions about Medicaid reform, it is important to understand where, on whom, and for what services Medicaid dollars are spent.

### Expenditures

In 1983, total Medicaid expenditures for Illinois were \$1,522.9 million; in 1994 the figure had risen to \$4,772.55 million. In fiscal year (FY) 1992, 20.2 percent of Illinois general funds were expended on Medicaid.

The following facts related to the annual growth for Illinois in Medicaid enrollees and for Medicaid expenditures for

1988 through 1990 are significant:

- the average annual growth in Medicaid enrollees was 2.6 percent;
- the average annual growth in Medicaid expenditures was 14.7 percent;
- the average annual growth in Medicaid expenditures per enrollee was 11.8 percent.



the elderly is for long-term care. While about 17 percent of resources expended on the elderly is for physicians, hospital care, and prescription drugs. When the expenditures for the disabled are examined, one finds 41 percent of those resources going to long-term care and 40 percent allocated to hospital care. Only about 11 percent of resources spent on the disabled are for prescription drugs and physicians.

A question that often arises is, "Is the money spent on long-term care being used to care for the poor or as long-term care insurance?" That question is difficult to answer with certainty because individual financial data are not accessible. However, one proxy for gauging if the elderly on Medicaid are truly poor is the percent of elderly Medicaid recipients who receive other welfare benefits. In Illinois, about 6 percent of the elderly on Medicaid receive other welfare benefits. Therefore, 94 percent of the elderly on Medicaid are not poor enough to be eligible for additional welfare benefits. From this, it follows that many of the elderly enrolled in Medicaid are enrolled so that their long-term care costs will be paid, and not because they are truly poor. For families on Medicaid, about 50 percent, also receive cash grants (welfare)<sup>3</sup> indicating they are truly poor. Most of the families with dependent children enrolled in Medicaid but who receive no cash

grants are pregnant women and/or families with young children. The federal government has mandated states to provide Medicaid for pregnant women and children who are living slightly above the poverty level.<sup>4</sup>

Families receiving Medicaid and cash grants are 50 percent of total Medicaid enrollees, accounting for only 22 percent of total Medicaid expenditures (see the chart). At the same time, families receiving Medicaid and no cash assistance are 22 percent of total Medicaid enrollees, using about 9 percent of Medicaid resources. The elderly and disabled account for 8 and 18 percent, respectively, of Medicaid enrollment, while using 66 percent of Medicaid resources. Data presented in Table 4 underscores the disproportionate relationship between a percentage of enrollees and the amount of resources each enrollee uses. The groups with the largest enrollment use the least.

### Discussions

Medicaid was designed as a stop-gap program to provide social assurance to poor people. It was assurance that they would be able to get the medical care they needed. It was to be short term and not a substitute for health insurance. Today that is no longer the case.

The program designed to help the poor provides help to less than two-thirds of our nation's poor. In Illinois the data tell us that the program has shifted from providing funds for the medical care of poor people to providing funds for the health care needs of families who are working poor, the elderly in long-term care facilities, and the disabled. It appears, given the distribution of Medicaid expenditures, that Medicaid no longer primarily provides funds for families who are in need, rather, it is more long-term care insurance for the elderly and the disabled, as well as health insurance for the disabled.

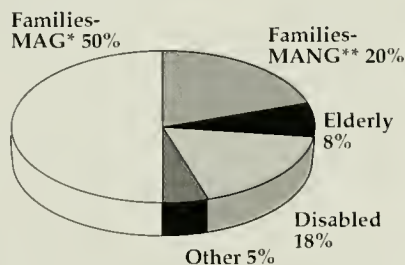
Any serious consideration of Medicaid reform would have to consider reform initiatives for all recipient groups, not just families with dependent children. Unfortunately, this does not often occur. For example, in Illinois there have been sweeping Medicaid revisions or reforms enacted and proposed, almost all of which are aimed only at families with dependent children. The primary suggested Medicaid reforms have focused on stricter eligibility requirements for families with dependent children, decreasing services available to families with dependent children, and placing families with dependent children

<sup>3</sup>Receiving cash grants indicates that family income is below poverty level. Not receiving cash grants indicates that household income is at or above poverty level, but there is no health insurance for family members.

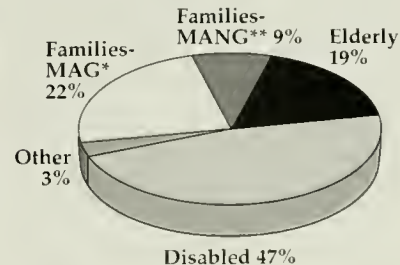
<sup>4</sup>The federal government has mandated such care and allows states some flexibility in determining how much above poverty level they are willing to go. The states are not allowed to cover pregnant women and children who live more than 200 percent above poverty; however, the states do have flexibility in setting the limit up to that level.

Medicaid Enrollment and Expenditures by Category of Assistance, FY1994

#### ENROLLMENT



#### EXPENDITURES



\* Medicaid plus cash grant; \*\* Medicaid no cash grant

Data Source: Center for Urban Research and Policy Studies, University of Chicago, 1995



into managed care settings.<sup>5</sup> Reform efforts aimed at the elderly or disabled are almost nonexistent.

The economic problems associated with Medicaid are more a function of expenditures for the disabled and the elderly rather than the costs of caring for poor women and children or able-bodied adults capable of working. Yet Medicaid reforms focus on poor women and children and the disabled and the elderly are specifically omitted from these reform efforts.

Attempting to fix the economic problems associated with Medicaid by "reforming" what is provided to those on whom the least is spent is going produce minimal savings. Poor women and children use a small percent of the Medicaid dollars, and there are ways that the money could be better spent (for example, for more preventive services rather than using the emergency room for primary and routine health care).

Many proposed solutions assume that capitated contracts for women and children on Medicaid will save money, and this will help the overall economic problems associated with the Medicaid program. While putting poor families in managed care settings may save some money, it will not save a great deal. Tighter eligibility requirements will mean that many poor people now receiving care will still need it, but Medicaid will no longer pay. Support for the care of poor people will still need to be generated from somewhere. Decreasing the level of services provided to families with dependent children will provide some economic relief, but again it will not be much relief.

In fiscal year 1993 Illinois spent \$7,900 per elderly Medicaid enrollee, \$9,000 per disabled enrollee, and

\$1,300 per family with dependent children. Decreasing the amount expended on the group for whom the least is spent cannot produce the economic savings needed. Currently there are no serious reform efforts aimed at cutting the cost of long-term care for the elderly or the care provided to the disabled, who require intensive and expensive care. Moreover, unlike services to poor families, it is care that is, generally, not short-term help until people can "get it together to take care of themselves." Without serious reform initiatives aimed at the elderly and the disabled, the fiscal crisis in Medicaid will only worsen.

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<sup>5</sup>A study by D. A. Freund and E. M. Lewit ("Managed Care for Children and Pregnant Women: Promises and Pitfalls," *The Future of Children*, Vol. 3, No. 2 (1993): 92-122) indicates that there is not as much money saved as predicted and that there is not as much harm to patients as predicated. In other words, there is no evidence that such a move saves a significant amount of money and there is no evidence that patients are ill-served by such contracts.

# The Economics of Pollution Reduction and Sulfur Dioxide Emissions Permits

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*Ironically, the net result of a trade between a New York firm that over-complies and sells its excess permits to an Ohio firm may be poorer air quality in New York.*

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Economists have put forward several market-based approaches for reducing the costs of improving environmental quality. The rationale for these approaches is the use of a price mechanism to provide firms with incentives to reduce their pollution levels. One example is an effluent fee, which is a tax on each unit of pollutant that a firm discharges. Another is a transferable discharge permit scheme that establishes a market and allows for trading in rights to pollute. This article discusses the recent implementation of an Environmental Protection Agency (EPA) program that utilizes transferable discharge permits to control sulfur dioxide emissions.

Many environmental problems arise because some property rights to amenities such as air and water are not clearly specified. For instance, particulate matter emitted from the factory smokestack may reduce visibility, compromise public health, or contribute to acid rain. Unless the firm emitting the smoke compensates each individual affected by the smoke, it does not pay the full costs of its actions and other interests also bear some of the costs. In such cases, it is difficult to negotiate a contractual arrangement with each affected party for proper compensation. Therefore, governments often intervene on behalf of the community.

Instead of the traditional government mandates, many levels of government are beginning to implement market-based programs to address environmental problems. For instance, such a plan facilitated the US transition from leaded to unleaded gasoline. The government established lead-reduction targets for each refinery. Refineries that over-complied with lead-reduction targets

deposited their savings into a "lead bank." Firms that could not meet compliance targets could withdraw these savings in order to meet overall reduction targets. There are also numerous tradable discharge permit programs for reducing water pollution, and several states have implemented these programs for wetlands protection. Recent Congressional amendments to the Clean Air Act established a program for trading rights to emit sulfur dioxide. Public utilities that generate electricity with coal-fired power plants are a principal source of these emissions, which are a known cause of acid rain.

## The 1990 Amendments to the Clean Air Act

The 1990 Amendments to the Clean Air Act established a market for the right to emit sulfur dioxide. The EPA administers the system and monitors firms to ensure compliance. The program uses on-site monitoring equipment to ensure that utilities comply with emissions standards and mandates stiff penalties for violators. Phase I of the program covers a limited number of firms and began in 1995. Phase II, which begins in the year 2000, incorporates stricter emissions standards and covers a larger number of firms.

The initial allocation of permits is an important aspect of the program. Most permits are based on past emission levels. Phase I affects plants that emit more than 2.5 pounds of sulfur dioxide per million Btus (MBtus) of heat that the firm used from 1985-1987. The government determines a firm's allocation of permits by multiplying 2.5 times the number of MBtus and converts the result to tons by dividing by 2,000. Firms can use the permits to emit, sell them, or

carry them forward to subsequent years. The system also affects new firms. For instance, if a mining company wanted to develop a smelting operation—a sulfur dioxide—generating activity—it would have to buy permits for the right to do so. Phase II will increase the number of firms covered and further limit emissions. An additional 700 firms will enter the program, and the units of sulfur per MBtu will be scaled back from 2.5 to 1.2.

In addition, the EPA auctions 3 percent of the total number of permits each year on the Chicago Board of Trade. As with any other commodity, anyone can buy and sell permits—including firms, speculators, and environmentalists. By the year 2010, aggregate sulfur dioxide emissions in the United States will be 10 million tons per year less than 1980 levels.

The rationale for the system is based on principles of cost-minimization. It grants flexibility to firms that would otherwise exceed their allotments. Management can decide the least-cost way to comply with the law, whether by altering its current production process, or by acquiring permits. Suppose that there are two firms that are located in the same area so their emissions have the same environmental impact. Firm 1 owns a permit, and its costs of reducing its emissions level by one ton is \$400. Firm 2 does not have a permit, and its abatement cost per ton is \$500. Firm 1 should be willing to sell its permit for any price greater than \$400. Similarly, firm 2 should buy at any price below \$500. The price of the permit should be between \$400 and \$500. A trade in this price range would reduce costs for both firms with no resulting difference in environmental quality.

However, analysts expected more robust trading and higher permit prices than have materialized. When Congress authorized the amendments to the Clean Air Act in 1990 many analysts believed that permits

would trade for more than \$1,000 each. Before the first auction in 1993 the price estimate had fallen to \$300–\$750. In fact, the average price from the first auction was slightly more than \$150—less than one-tenth of the initial estimates. The average price of Phase II permits was even lower at \$136. Publicly announced trading prices have been slightly higher, but still lower than anticipated. In addition, there have been far fewer trades than analysts anticipated, fewer than 40 trades in the first two years.

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The situation presents some interesting scenarios for other industry participants, and Illinois utilities are pursuing a number of strategies. Illinois Power has purchased close to half a million permits, which it believes are cheaper than alternative abatement strategies. Commonwealth Edison will not use all of its allotted permits, but it is waiting for prices to increase before it will sell the surplus. CIPS has already sold a number of permits in order to finance pollution-control equipment, which tends to be expensive.

Environmental groups are also monitoring the situation. These groups should be indifferent to the low trading price; the attainment of a certain emissions target is independent of the permit price. Low prices, however, may present opportunities for environmental

groups to purchase and retire some permits, which would reduce emissions below aggregate target levels. Some permits have already been retired for health's sake. One Connecticut-based utility made a highly publicized (and tax-deductible) donation of 10,000 allowances to the American Lung Association.

Environmentalists, however, are concerned about the trading scheme for other reasons. First, they may believe that the government is allocating too many permits. Second, the air quality in any particular area is not solely a function of total US emissions. Therefore, even though the system reduces total sulfur dioxide emissions, the air quality in every region will not necessarily improve.

The difference between sulfur dioxide and carbon dioxide illustrates the point. Carbon dioxide is a suspected cause of global warming. The carbon dioxide buildup in the atmosphere, however, is independent of the site of the source—whether that source is the United States or China, or anywhere. The environmental impact of sulfur dioxide, however, varies by location, even though permits are valued equally. For instance, a power generator in New York state may cause little damage from acid rain, as the weather patterns may take the emissions out to sea. Emissions from a coal-fired plant in Ohio, however, may produce serious environmental impact on northeastern locales. Ironically, the net result of a trade between a New York firm that over-complies and sells its excess permits to an Ohio firm may be poorer air quality in New York. Despite the differential impacts, permits trade one-for-one. The system's use of this ratio may cause environmental groups to lobby for a trading system based on damage ratios, or for scrapping the system altogether.

While industry officials and environmental groups evaluate their options, economists are contemplating the sluggish trading and



surprising divergence between expected and actual trading prices. As usual there is no shortage of explanations for why predictions were wrong.

### **Transferable Discharge Permits**

The EPA market in sulfur dioxide permits is a transferable discharge permit scheme in which the government establishes a market to pollute by issuing permits that firms need in order to discharge emissions. If the firm requires additional credits, it can choose to purchase more; or if the firm has extra credits, it can sell them, retire them, or carry them over for future years.

The government decides the number of permits to issue, and, therefore, it knows aggregate emissions in advance. Because monitoring is fairly precise and penalties for non-compliance are quite stiff, cheating seems unlikely. The system is resistant to inflation. Firms will buy and sell based on the real value of the permits, and the government will not have to link fees to an inflation index.

The system provides the least-cost solution because firms know their own cost of abatement and, therefore, know whether it is beneficial to buy or sell permits. Another advantage of the system is that if a firm can reduce emissions for less than the price of the permits it is holding, it has clear incentives to abate and sell the permits. In fact, the firm has the incentive to continue abating as long as its cost of abatement is less than the price. If the market is **well-defined** firms will alter their choice of raw materials and production processes, and will trade permits until the cost of abatement is the same for each firm—and equals the permit price.

### **Low Prices, Light Trading**

The Electric Power Research Institute, which uses a large computer model to estimate utility abatement costs, projected that some midwest plants would exceed \$300 for some plants in the midwest during Phase I, and estimates for Phase II are close

to \$500. So why are permits selling at less than one-third of that amount? When firms do not respond to incentives, economists want to know why. The first step is to examine the plausibility of the underlying assumptions. The tradable discharge permits scheme rests on three principal assumptions:

- Firms comply with the system.
- The market is well-defined and reasonably competitive
- Firms minimize costs.

The first assumption is supported by the on-site monitoring devices and penalties for violators should reduce incentives to evade regulations. Therefore, the latter two assumptions may provide insights for the lack of demand and low prices.

### **Sufficiently Large, Reasonably Competitive Markets**

The benefits of competitive markets may be contingent on the number of buyers and sellers involved. Thin trading implies that most firms do not consider buying permits as a viable option for reducing costs. There have been several conjectures as to how large a market must be in order to work. Some analysts assert that the current market is too small to be effective.

Another reason for the unexpectedly low number of trades may have more to do with the emergence of a new market than its size. Several components of this particular market may have induced a supply glut. The principal factor is price uncertainty. When Congress authorized the amendments to the Clean Air Act in 1990, firms began to devise compliance strategies. If the expected permit prices were significantly higher than probable abatement costs, firms had incentives to over-comply and sell the remaining permits for a handsome profit.

Also, the Phase I cutbacks in emissions are not so severe as those slated for Phase II. Many firms in the program have not made previous investments to reduce sulfur emissions and, therefore, currently have

lower abatement costs than they will face later. Given the high prices they expected for the permits, they made arrangements to reduce emissions consistent with current, relatively low costs. As a result, demand for permits is low. Another factor is state regulations that force many firms to abate further than their federal allotment. These firms automatically over-comply. Each of these factors should contribute to an excess of permits.

The excess-supply argument may overstate the case. Many firms have chosen to switch to low-sulfur coal rather than to install scrubbers to meet their obligations. These firms should be able to buy up large numbers of permits, switch back to high-sulfur coal, and still come out ahead. Although so far observed trades have been for low prices, firms do not know with a much probability that the price will remain low, whether they can actually procure permits at the current price, or whether the current system will continue indefinitely. Firms with permits may be reluctant to sell them at current prices—so that permits are not really available at these prices.

### **Cost Minimization**

Another potential stumbling block for the tradable discharge permits market may have to do with the fact that the principal market participants are public utilities. Many decisions of public utilities are subject to the approval of state regulators. In many states it is unclear who would benefit from savings generated through savvy dealings in tradable discharge permits—shareholders or rate payers. If a utility pursues a strategy of complete compliance with the law, it is likely that it can pass the additional costs on to customers; whereas, if it loses a lot of money speculating with tradable discharge permits, it is not clear whether the state public utility board would allow them to pass their losses on to the consumer.

The implication of this line of argument is that electric utilities may not pursue cost-minimizing strategies if there is any ambiguity with respect to their profit margins. As regulated monopolies, they can pursue more certain strategies, pass the additional costs on to rate payers, and offer security to shareholders.

Furthermore, firms can carry permits forward to hedge against future uncertainty. For instance, if there were to be a sudden increase in the price of low-sulfur coal, firms that held permits would not have to purchase permits on the open market, where prices would also likely increase. This may be another factor in the low number of trades, but restricting supply does not explain the low prices.

Another likely reason why firms are reluctant to use the purchase of permits as a tool to reduce costs are the possible public relations ramifications of such a strategy. A firm may save money by emitting more than its allotment, but it might face backlash from the public. For instance,

the former governor of New York was especially unhappy about the potential environmental impact of some proposed trades in the Adirondacks—and even spoke of revoking the state charters of some firms. Other cases, such as Illinois Power's declaration that it plans to purchase and use permits as a cost-reducing tool, have elicited rather tame public response. Nevertheless, these considerations certainly reduce the incentive for firms to pursue permits as a means to lower costs.

## Conclusions

Despite economists' aversion to uniform government-mandated emissions levels for addressing environmental problems, their favorite solution—a transferable discharge permit scheme—is essentially acting as just such a system. For the most part, firms are not trading, and, therefore, their emissions are at or below their initial allotments.

As Phase II approaches, more firms will enter the market for tradable discharge permits for sulfur dioxide and the more stringent restrictions will force firms to make further reductions in emissions. It is, therefore, likely that there will be more action at the Chicago Board of Trade. It is questionable whether the Phase II addition of more firms to the program will make purchasing permits more attractive. Will new firms base planning decisions on current prices for tradable discharge permits or will they expect the market to firm up and prices to rise? Given that utilities firms in the market are not traditional cost-minimizers and that they face potential public relations problems or political pressures to adopt certain strategies, it seems unlikely that the market for sulfur dioxide permits will ever operate like a textbook case.

## *Economic Forecasting and The Illinois Econometric Model*

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*The services-producing sector, and the services industries in particular, will experience very strong growth of 5.6 percent in 1996 and 5.2 percent in 1997.*

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At least once a week the general public is offered some economic forecast. Whether it is the newest prediction generated by a government agency or debates of the effects of legislative policy, economic forecasting gets a lot of media play. Generally, only the results relevant to the issue discussed are reported, often without reference to the underlying assumptions. When confronted with several contradictory forecasts, the observer has to wonder who is right, who is wrong, and, most important, why. In the simplest terms, an economic forecast is the product of the raw material, data, as processed by a computer-driven set of mathematical formulae and relationships determined according to economic theory. The analysis of economic forecasts relies heavily upon the understanding of the relationships among the variables within any given model. Announcing results without providing the fundamental assumptions of the analysis usually does not provide information required to evaluate the level of reliability of the predictions. Thus, one should be cautious about making decisions based upon forecast results.

We use the Illinois Econometric Model (IEM) to generate the forecasts presented in each issue of the *Illinois Business Review*. The IEM generates forecast statistics for Illinois employment, real personal income, gross state product, and retail sales.

### **The Data**

In the table that presents the forecast results at the end of each issue, the Illinois economy is divided into several sectors, subsectors, and component industries. Much of the

data used to run the model is entered by industry. This will become very important as we establish the links that actually drive the results of the forecast.

We get the Illinois data from a variety of sources. Data for employment are produced by the US Bureau of Labor Statistics, personal income and gross state product come from the Bureau of Economic Analysis, retail sales come from the US Department of Commerce. Industry-level data for such economic variables as employment, personal income, and retail sales are also entered for the national economy. The national forecasts are generated by the WEFA Group and DRI/McGraw-Hill, two large, private economic forecasting services that publish national forecasts for the major industries, extending out two years (which explains why the IEM forecasts for the same period).

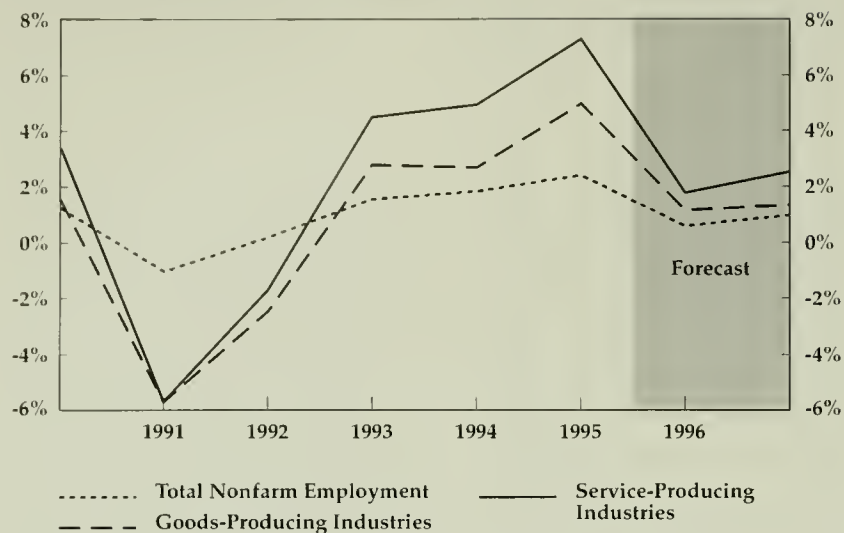
### **The Model**

The forecasts for Illinois industries are based on the forecasts of these industries across the country. We chose national forecasts rather than some other basis, say a midwest region, because *good* industrial level data exists for the national economy and may not exist for regions of the country. With the availability of inexpensive computing power, complex analysis is available to practically everyone; however, it is irrelevant if *good data* does not exist. By *good data*, I mean data that is consistently measured and maintained over a long period of time. If data are not measured, maintained, and organized consistently, the results of the analysis may not be reliable.

In the case of forecasting we are trying to establish relationships



Growth in Goods- and Services-Producing Sectors



among variables for the purpose of predicting their behavior in the future. We establish a framework based upon our theoretical beliefs about the relationship between the Illinois economy and the national economy and our knowledge that certain economic variables have been strong predictors in the past. The forecaster looks for mathematical relationships that improve the forecasting power even though there may not be a strong theoretical relationship. Part of the job of maintaining such a model is to verify that the relationships have as much predictive power as possible. Having mathematically defined these relationships, we can now use forecasts

of the performance of the national economy to generate forecasts of the performance of the Illinois economy.

### The Current Forecast

The forecast results for the third quarter of 1995 are printed at the end of this issue. Modest growth is forecast for employment, personal income, and gross state product. The forecasts reflect the underpinnings of less optimistic forecasts of the national economy. The Chart illustrates the growth patterns of employment in the two main sectors of the Illinois economy, goods production and services production. The Illinois economy is forecast to expand at a slower rate through 1996.

The services-producing sector is about three-fourths of the state economy. An increased expansion in the economy after 1996 will be, in large part, driven by robust growth in the services-producing sector. This shift in the composition of the Illinois economy is reflected further in the expansion of real personal income. The 3.8 percent growth rate of total nonfarm personal income forecast for 1996 is largely the result of the 3.4 percent expansion in the services-producing sector.

Within the services-producing sector, personal income in the services industries is predicted to expand 5.0 percent in 1996 and 4.5 percent in 1997. This is the largest sustained expansion in personal income forecast for the economy. Thus, even though a contraction is forecast for total personal income, much of the contraction is concentrated in the goods-producing sectors.

Gross state product will remain robust through 1996, then decrease to 2.5 percent in 1997. Again, much of the economic contraction will be concentrated in the goods-producing sector. The services-producing sector, and the services industries in particular, will experience very strong growth of 5.6 percent in 1996 and 5.2 percent in 1997.

# Illinois Tax Revenues Remain Steady

The Illinois Econometric Model has forecast steady growth of tax revenues. Although total net general funds revenue is anticipated to contract in the 1996 fiscal year (see Table 1a), the anticipated effects of inflation will moderate the contraction. The model projects growth of approximately 2 percent in the 1996 and 1997 fiscal years for *real* total net general funds revenue as (see Table 1b). Real tax revenue is adjusted to reflect the effects of inflation. Total net general funds revenue in current dollars is projected to grow at 4.8 percent for the 1996 and 1997 fiscal years.

Real net retail sales, real net corporate income, and real miscellaneous tax revenues are expected to remain steady with growth of approximately 1 percent. Real net personal income tax revenues are expected to grow at 5.3 percent and 4.3 percent in the 1996 and 1997 fiscal years.

The Illinois Econometric Model projects lower tax revenues than are projected by the state legislature's Illinois Economic and Fiscal Commission (IEFC) and the governor's Bureau of the Budget (BOB). Table 2 shows a comparison of the results of the three forecasts.

Table 1a: Net Fiscal Year Tax Revenues by Major Sources, Spring 1995, Current Dollars<sup>a</sup>

Dates	1991	1992	1993	1994	1995	1996	1997
Total Net General Funds Revenue	11,185	11,501	11,941	12,492	13,401	14,046	14,722
percent change	2.4	2.8	3.8	4.6	7.3	4.8	4.8
Net Personal Income	4,399	4,495	4,712	4,947	5,296	5,714	6,123
percent change	6.1	2.2	4.8	5	7.1	7.9	7.2
Net Retail Sales	3,873	4,021	4,156	4,360	4,628	4,785	4,905
percent change	1.5	3.8	3.4	4.9	6.2	3.4	2.5
Net Corporate Income	615	627	681	756	852	866	898
percent change	0.5	1.8	8.7	11	12.8	1.6	3.7
Miscellaneous	2,297	2,358	2,392	2,430	2,624	2,682	2,796
percent change	-2	2.7	1.4	1.6	8	2.2	4.3

Table 1b: Net Fiscal Year Tax Revenues by Major Sources, Spring 1995, 1987 Dollars<sup>a</sup>

Dates	1991	1992	1993	1994	1995	1996	1997
Total Net General Funds Revenue	9,667	9,619	9,750	10,014	10,517	10,755	10,973
percent change	-1.8	-0.5	1.4	2.7	5	2.3	2
Net Personal Income	3,799	3,757	3,846	3,965	4,156	4,374	4,562
percent change	1.7	-1.1	2.3	3.1	4.8	5.3	4.3
Net Retail Sales	3,351	3,367	3,395	3,497	3,634	3,666	3,658
percent change	-2.7	0.5	0.9	3	3.9	0.9	-0.2
Net Corporate Income	532	523	556	605	668	663	669
percent change	-3.6	-1.5	6.1	9	10.4	-0.8	0.9
Miscellaneous	1,985	1,972	1,953	1,947	2,059	2,053	2,084
percent change	-6	-0.7	-1	-0.2	5.7	-0.3	1.5

Source: BEBR General Funds Tax Revenue Forecast Model.

<sup>a</sup> Note: General Funds Revenue for December 1994 was forecast because data was not available at time of writing.

Table 2: Fiscal Year Forecast Comparison, Spring 1995

Tax	IEFC <sup>a</sup>	BOB <sup>b</sup>	IEM	BOB/IEFC Average	Difference between BEBR and Average
Individual	5,170	5,306	5,296	5,238	58
Retail Sales	4,585	4,640	4,628	4,613	-698
Corporate	800	835	852	818	-57
Miscellaneous <sup>c</sup>	2,467	2,123	2,624	2,295	-491
Total Net Revenues	13,022	12,904	13,400	12,963	-1,802

<sup>a</sup> Source: IEFC, 1994 General Funds Revenue Report, April 1994.

<sup>b</sup> Source: April 1995 Quarterly Revenue Forecast. Estimates of General Funds Revenues Fiscal Year 1995, FY96 Budget Book Estimates, p. 5.

<sup>c</sup> Miscellaneous includes lottery revenues, but does not include the \$45 million transfer expected by the IEFC, or \$25 million anticipated by the BOB, from the Build Illinois Fund.

# Forecast Statistics

## Illinois Employment (in thousands)

	1991	1992	1993	1994	1995	1996	1997
<b>Total Nonfarm Employment</b>	<b>5,222.6</b>	<b>5,226.4</b>	<b>5,308.4</b>	<b>5,405.5</b>	<b>5,535.4</b>	<b>5,570.1</b>	<b>5,624.9</b>
% change	-1.1	0.1	1.6	1.8	2.4	0.6	1.0
<b>Goods Producing Industries</b>	<b>1,155.7</b>	<b>1,125.5</b>	<b>1,139.1</b>	<b>1,149.0</b>	<b>1,179.3</b>	<b>1,186.6</b>	<b>1,191.9</b>
% change	-4.7	-2.6	1.2	0.9	2.6	0.6	0.4
<b>Mining</b>	<b>18.5</b>	<b>17.4</b>	<b>15.3</b>	<b>15.5</b>	<b>15.0</b>	<b>15.7</b>	<b>15.4</b>
% change	-6.0	-6.1	-11.8	1.1	-3.1	5.0	-2.1
<b>Construction</b>	<b>204.9</b>	<b>196.9</b>	<b>198.2</b>	<b>203.2</b>	<b>214.2</b>	<b>219.4</b>	<b>222.4</b>
% change	-6.9	-3.9	0.7	2.5	5.4	2.4	1.4
<b>Manufacturing</b>	<b>932.3</b>	<b>911.2</b>	<b>925.5</b>	<b>930.3</b>	<b>950.0</b>	<b>951.5</b>	<b>954.1</b>
% change	-4.2	-2.3	1.6	0.5	2.1	0.1	0.3
<b>Durable Manufacturing</b>	<b>552.9</b>	<b>534.7</b>	<b>544.2</b>	<b>548.1</b>	<b>567.2</b>	<b>565.7</b>	<b>563.9</b>
% change	-6.4	-3.3	1.8	0.7	3.5	-0.3	-0.3
<b>Nondurable Manufacturing</b>	<b>379.3</b>	<b>376.5</b>	<b>381.4</b>	<b>382.2</b>	<b>382.8</b>	<b>385.7</b>	<b>390.2</b>
% change	-0.9	-0.7	1.3	0.2	0.2	0.8	1.2
<b>Service Producing Industries</b>	<b>4,067.0</b>	<b>4,100.9</b>	<b>4,169.3</b>	<b>4,256.5</b>	<b>4,356.2</b>	<b>4,383.6</b>	<b>4,433.0</b>
% change	0.0	0.8	1.7	2.1	2.3	0.6	1.1
<b>Transportation and Public Utilities</b>	<b>304.4</b>	<b>302.8</b>	<b>309.9</b>	<b>313.2</b>	<b>322.7</b>	<b>325.3</b>	<b>326.2</b>
% change	-1.3	-0.5	2.3	1.1	3.0	0.8	0.3
<b>Wholesale Trade</b>	<b>354.8</b>	<b>345.9</b>	<b>338.4</b>	<b>340.3</b>	<b>348.2</b>	<b>348.8</b>	<b>349.6</b>
% change	-1.4	-2.5	-2.2	0.6	2.3	0.2	0.2
<b>Retail Trade</b>	<b>892.7</b>	<b>889.8</b>	<b>906.1</b>	<b>935.6</b>	<b>944.5</b>	<b>944.2</b>	<b>954.6</b>
% change	-1.2	-0.3	1.8	3.3	1.0	0.0	1.1
<b>Finance, Insurance and Real Estate</b>	<b>377.5</b>	<b>378.4</b>	<b>382.1</b>	<b>387.5</b>	<b>398.3</b>	<b>399.2</b>	<b>398.5</b>
% change	-0.4	0.2	1.0	1.4	2.8	0.2	-0.2
<b>Services</b>	<b>1,366.9</b>	<b>1,409.9</b>	<b>1,464.7</b>	<b>1,502.4</b>	<b>1,558.6</b>	<b>1,588.9</b>	<b>1,626.6</b>
% change	1.4	3.1	3.9	2.6	3.7	1.9	2.4
<b>Government</b>	<b>770.6</b>	<b>773.9</b>	<b>768.1</b>	<b>777.5</b>	<b>783.8</b>	<b>777.1</b>	<b>777.4</b>
% change	0.6	0.4	-0.7	1.2	0.8	-0.9	0.0

## Real Gross State Product (in millions of 1987 Dollars)

	1991	1992	1993	1994	1995	1996	1997
<b>Total Gross State Product</b>	<b>228,520</b>	<b>243,434</b>	<b>244,332</b>	<b>257,087</b>	<b>267,814</b>	<b>278,997</b>	<b>285,998</b>
% change	-3.4	6.5	0.4	5.2	4.2	4.2	2.5
<b>Goods Producing Industries</b>	<b>56,913</b>	<b>57,634</b>	<b>59,256</b>	<b>62,895</b>	<b>65,958</b>	<b>67,208</b>	<b>68,505</b>
% change	-2.9	1.3	2.8	6.1	4.9	1.9	1.9
<b>Mining</b>	<b>1,287</b>	<b>1,260</b>	<b>1,127</b>	<b>1,123</b>	<b>1,123</b>	<b>1,142</b>	<b>1,121</b>
% change	-2.7	-2.1	-10.6	-0.3	0.0	1.7	-1.8
<b>Construction</b>	<b>10,184</b>	<b>9,863</b>	<b>10,031</b>	<b>10,843</b>	<b>11,424</b>	<b>11,484</b>	<b>11,362</b>
% change	-7.4	-3.2	1.7	8.1	5.4	0.5	-1.1
<b>Manufacturing</b>	<b>45,442</b>	<b>46,511</b>	<b>48,098</b>	<b>50,929</b>	<b>53,411</b>	<b>54,582</b>	<b>56,021</b>
% change	-1.8	2.4	3.4	5.9	4.9	2.2	2.6
<b>Durable Manufacturing</b>	<b>22,925</b>	<b>23,180</b>	<b>23,843</b>	<b>25,842</b>	<b>27,361</b>	<b>27,741</b>	<b>28,327</b>
% change	-5.5	1.1	2.9	8.4	5.9	1.4	2.1
<b>Nondurable Manufacturing</b>	<b>22,517</b>	<b>23,331</b>	<b>24,255</b>	<b>25,087</b>	<b>26,050</b>	<b>26,841</b>	<b>27,694</b>
% change	2.2	3.6	4.0	3.4	3.8	3.0	3.2
<b>Service Producing Industries</b>	<b>179,554</b>	<b>186,753</b>	<b>194,017</b>	<b>201,561</b>	<b>211,481</b>	<b>219,396</b>	<b>226,865</b>
% change	1.8	4.0	3.9	3.9	4.9	3.7	3.4
<b>Transportation and Public Utilities</b>	<b>24,507</b>	<b>25,218</b>	<b>26,197</b>	<b>27,278</b>	<b>28,659</b>	<b>29,736</b>	<b>30,697</b>
% change	1.4	2.9	3.9	4.1	5.1	3.8	3.2
<b>Wholesale Trade</b>	<b>20,519</b>	<b>21,243</b>	<b>21,789</b>	<b>22,381</b>	<b>23,412</b>	<b>24,346</b>	<b>25,229</b>
% change	3.2	3.5	2.6	2.7	4.6	4.0	3.6
<b>Retail Trade</b>	<b>20,911</b>	<b>21,381</b>	<b>21,927</b>	<b>22,888</b>	<b>24,476</b>	<b>24,977</b>	<b>25,362</b>
% change	-1.2	2.3	2.6	4.4	6.9	2.0	1.5
<b>Finance, Insurance and Real Estate</b>	<b>41,880</b>	<b>43,609</b>	<b>45,381</b>	<b>47,160</b>	<b>49,115</b>	<b>50,647</b>	<b>52,102</b>
% change	1.2	4.1	4.1	3.9	4.1	3.1	2.9
<b>Services</b>	<b>49,916</b>	<b>52,902</b>	<b>55,802</b>	<b>58,633</b>	<b>62,055</b>	<b>65,506</b>	<b>68,890</b>
% change	3.1	6.0	5.5	5.1	5.8	5.6	5.2
<b>Government</b>	<b>21,821</b>	<b>22,400</b>	<b>22,923</b>	<b>23,221</b>	<b>23,765</b>	<b>24,182</b>	<b>24,585</b>
% change	1.9	2.7	2.3	1.3	2.3	1.8	1.7



*Real Personal Income (in millions of 1987 dollars)*

	1991	1992	1993	1994	1995	1996	1997
Total Personal Income	201,915	208,872	213,421	221,156	230,538	239,282	246,486
% change	-0.9	3.4	2.2	3.6	4.2	3.8	3.0
Total Nonfarm Personal Income	147,306	152,366	156,085	162,738	169,649	174,812	179,661
% change	-0.5	3.4	2.4	4.3	4.2	3.0	2.8
Goods Producing Industries	39,597	39,935	40,702	43,146	45,258	46,179	47,085
% change	-4.0	0.9	1.9	6.0	4.9	2.0	2.0
Mining	821	801	681	723	721	742	714
% change	-2.1	-2.4	-15.1	6.3	-0.4	2.9	-3.8
Construction	8,234	8,016	8,195	8,917	9,334	9,321	9,199
% change	-8.3	-2.6	2.2	8.8	4.7	-0.1	-1.3
Manufacturing	30,542	31,118	31,827	33,506	35,203	36,116	37,172
% change	-2.9	1.9	2.3	5.3	5.1	2.6	2.9
Durable Manufacturing	17,858	17,851	18,386	19,804	21,235	21,774	22,259
% change	-5.2	0.0	3.0	7.7	7.2	2.5	2.2
Nondurable Manufacturing	12,683	13,266	13,441	13,702	13,968	14,342	14,913
% change	0.6	4.6	1.3	1.9	1.9	2.7	4.0
Service Producing Industries	107,022	111,721	114,645	118,794	124,392	128,633	132,576
% change	0.9	4.4	2.6	3.6	4.7	3.4	3.1
Transportation and Public Utilities	10,897	11,268	11,677	12,231	12,827	13,101	13,345
% change	-0.2	3.4	3.6	4.7	4.9	2.1	1.9
Wholesale Trade	12,010	12,179	11,964	12,365	13,208	13,743	14,115
% change	-1.2	1.4	-1.8	3.4	6.8	4.0	2.7
Retail Trade	13,103	13,387	13,660	14,219	15,132	15,284	15,452
% change	-1.6	2.2	2.0	4.1	6.4	1.0	1.1
Finance, Insurance and Real Estate	12,612	13,916	14,294	15,056	15,616	16,164	16,732
% change	2.2	10.3	2.7	5.3	3.7	3.5	3.5
Services	38,706	40,733	42,419	44,068	46,190	48,478	50,650
% change	1.3	5.2	4.1	3.9	4.8	5.0	4.5
Government	19,693	20,238	20,631	20,855	21,417	21,864	22,281
% change	2.9	2.8	1.9	1.1	2.7	2.1	1.9

*Real Illinois Retail Sales (in millions of 1987 dollars)*

	1991	1992	1993	1994	1995	1996	1997
Total Retail Sales	78,021	77,039	77,555	79,046	81,317	83,894	86,088
% change	-1.3	-1.3	0.7	1.9	2.9	3.2	2.6
Durable Goods	26,463	27,831	29,938	31,954	32,290	32,134	32,645
% change	-6.9	5.2	7.6	6.7	1.1	-0.5	1.6
Nondurable Goods	51,558	49,208	47,617	47,092	49,027	51,761	53,443
% change	1.9	-4.6	-3.2	-1.1	4.1	5.6	3.2

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# Illinois Business Review

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## Contents

---

3 *A Message from the Dean*

---

5 *1996 Illinois Economic Forecast*  
Anil Bera and Harvey B. Westbrook, Jr.

---

10 *Forecast Statistics*

---

12 *The Illinois Fiscal Outlook*  
J. Fred Giertz

---

17 *State Pension Systems: Will They Be Able to Pay?*  
Stephen P. D'Arcy and Pyungsuk Oh

---

23 *The Search for a 1995 Agricultural and Food Policy*  
Robert G.F. Spitze

---

26 *The 1996 Outlook*  
Richard J. Arnould

---

# A Message from the Dean



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**T**he College of Commerce and Business Administration at the Urbana-Champaign campus of the University of Illinois is pleased to present once again this annual outlook issue of the *Illinois Business Review*, which examines prospects for the economic performance of the state of Illinois for the coming year.

This publication comes to you from our Office of Research under Director Richard J. Arnould and reflects the breadth of our definition of education. As the major research university of the state, we recognize as one of our areas of responsibility the collection and dissemination of these data and the interpretations that accompany them.

The forecast for this new year is for the economy to remain steady with moderate growth continuing. Our authors discuss prospects for growth in employment, personal income, private investment, consumption, retail sales, and state

revenues—including the current improved revenue picture and warnings for future challenges to meet state expenditures. The continuing changes in the agricultural sector are also reviewed.

We are indebted to Ameritech for its support of our ongoing efforts to improve and expand the Illinois Econometric Model. Our aim is to make it increasingly useful to business and community leaders, academic researchers, government policymakers, and interested citizens. Quarterly forecast data generated by the model are published in every issue of the *Illinois Business Review*.

We are grateful to all of those whose efforts contributed to the preparation of this special issue of the *Review*. Your comments and suggestions for future issues are most welcome. Please send them to Janet Fitch, editor, *Illinois Business Review*, Office of Research, 428 Commerce West, 1206 South Sixth Street, Champaign, IL 61820.

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## The Illinois Econometric Model

The Illinois Econometric Model (IEM) is a forecasting model developed by the Bureau of Economic and Business Research at the University of Illinois at Urbana-Champaign. The IEM projects the behavior of several economic variables of the major sectors of the Illinois economy, such as employment, personal income, gross state product, and consumer spending as measured by retail sales. The IEM forecasts the behavior of these economic variables by using national variables as the underlying "drivers" of the state economy. Forecasts generated by the WEFA Group and DRI/McGraw-Hill, two national economic forecasting organizations are used as the basis for the forecasts of the Illinois economy. These use large econometric models to generate forecasts for major sectors of the national economy.

Because this article was prepared near the end of 1995, final data were not available for the year as a whole. Consequently, figures quoted for 1995 will be based partly on the historical record and partly on our end-of-year forecasts of the final data for the year.

## The National Economy

Is the US economy facing boom or bust? The answer is that neither is going to happen. Real gross domestic product (GDP), the value of all goods and services produced in a given period and adjusted for the effects of inflation, grew at a surprising 4.2 percent annual rate in the third quarter of 1995 after very modest growth of 1.3 percent in the second quarter. The overall growth for 1995 is expected to be 3.3 percent.

There are, however, some negative signs for the prospects of future growth. Total consumer debt as a percent of disposable income is now at a record level of 19 percent, surpassing its 1989 peak level. The savings rate remains very low—just around 4 percent. The index of leading economic indicators fell 1 percent in September. These mixed signals are characteristics of moderate growth. The WEFA Group projects modest growth of 2.5 percent and 2.4 percent in 1996 and 1997 (see Chart 1). DRI/McGraw Hill forecast a somewhat larger expansion, 2.6 percent, for 1997.

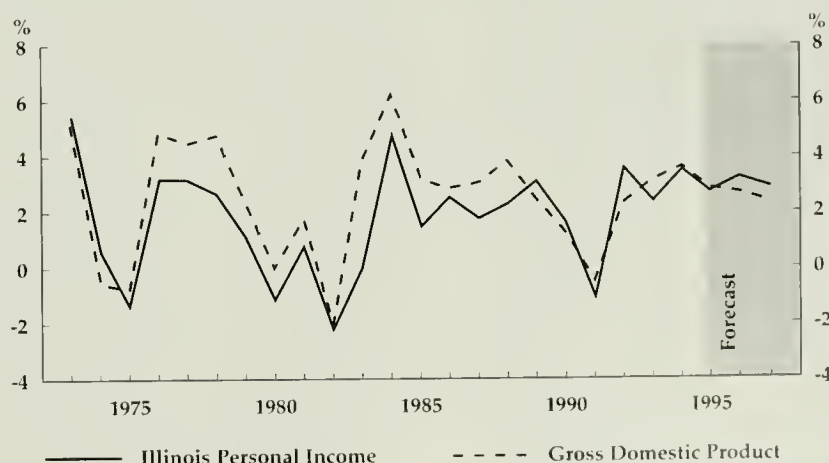
Employment grew moderately at 3.0 percent and 2.3 percent during 1994 and 1995. The WEFA Group projects more modest growth at the rates of 1.5 percent and 1.4 percent for the next two years. DRI/McGraw Hill forecasts slightly higher rates. Growth in employment will be primarily due to increases in services employment in which transportation, wholesale and retail trade, health care, utilities, business and

social services are included. Low mortgage rates will again induce increased residential construction. The relatively rapid growth during the last few years has absorbed much of the excess office space, and non-residential construction can be expected to increase.

However, employment levels will contract in the mining and manufacturing sectors. The civilian unemployment rate was 6.1 percent and 5.6 percent during 1994 and 1995, and it is expected to remain low for the next few years. DRI/McGraw Hill forecasts unemployment rates of 5.6 percent in 1996 and 5.8 percent in 1997. The WEFA Group forecasts for unemployment are 5.8 percent and 6.0 percent for 1996 and 1997, respectively.

Generally, an unemployment rate below 6 percent leads to wage inflation. However, the recent low unemployment rate has not led to wage and salary growth. Rapid productivity growth during 1995 also kept inflation very stable despite the unemployment rate of 5.6 percent. One

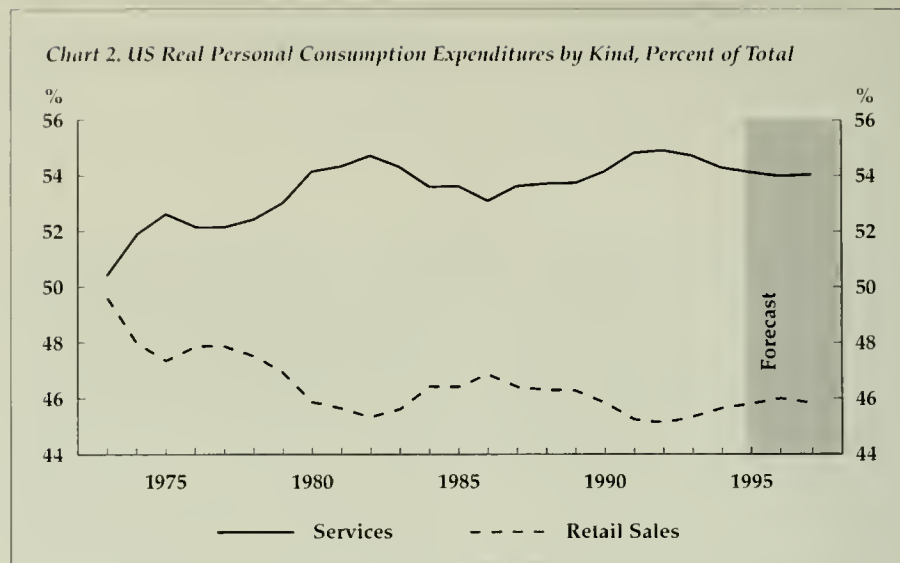
Chart 1. US Gross Domestic Product and Illinois Personal Income Growth



important factor in determining the direction of inflation is the unemployment rate at which inflation is stable (NAIRU). Both this rate and the unemployment rate jointly influence the direction of inflation. Since the current unemployment rate averages of around 5.6 percent, the DRI/McGraw Hill *Review of the US Economy*, argues that the NAIRU should be about 5.5 percent. As productivity growth slows down, the NAIRU is expected to rise, and, consequently, the unemployment rate is expected to be close to or slightly below the NAIRU over the next few years. As a result, the rate of inflation should remain stable. The consumer price index (CPI) was 2.7 percent and 2.6 percent in 1993 and 1994, respectively, and it is expected to be 2.9 percent through 1995. This is the first time in over 30 years we have had three back-to-back years below 3.0 percent inflation. Predictions also look optimistic for the next few years. DRI/McGraw Hill forecasts CPI to continue at 2.9 percent during 1996 and 1997, while the WEFA Group forecasts of CPI are even lower at 2.5 percent and 2.6 percent for the next two years.

The producers price index (PPI), which measures the changes in prices that businesses pay for their inputs, provides an early indication of future inflation. The PPI will be fairly flat. For finished goods, the PPI is expected to grow 2.0 percent in 1995, after growing only 0.6 percent in 1994. DRI/McGraw Hill predicts PPI to be 2.1 percent and 1.8 percent for 1996 and 1997. The WEFA Group forecasts are even lower—1.7 percent for the next two years.

Real personal consumer expenditures, the total value of spending on retail goods and various services adjusted for inflation, rose 3.5 percent in 1994 and 3.0 percent in 1995. The DRI/McGraw Hill forecasts for real personal consumption expenditures are 3.3 percent for 1996 and 2.5 percent for 1997. The WEFA Group also projects a decline in growth but

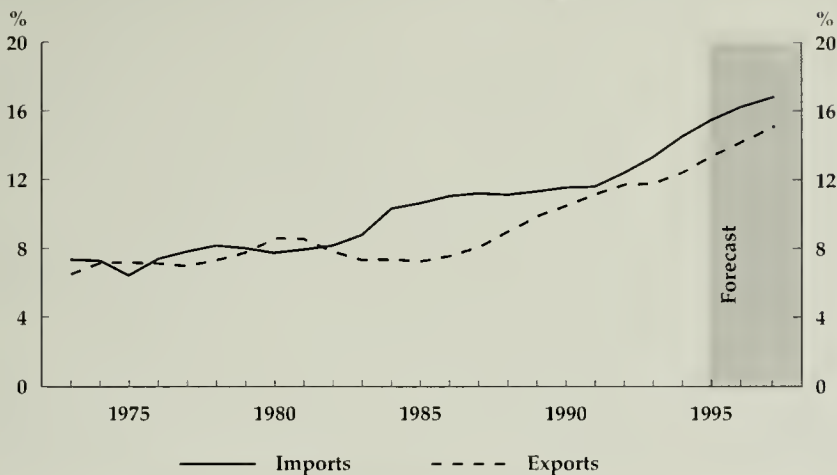


with more pessimistic rates of 2.2 percent and 1.9 percent for the next two years. Much of this growth will come from the expenditures on services and durable goods (such as automobiles, personal computers, and television sets), although expenditures on nondurable goods are also expected to register positive growth. Prospects of sluggish growth in income and employment could be part of the reason for this constrained consumption growth. High consumer debt may also be a factor. Chart 2 shows the breakdown of real personal consumption expenditures into two components, spending on retail goods and spending on services. As the chart shows, the share of spending for services will increase over the forecast period, while the share spending for retail purchases will drop. This is due to very slow growth in expenditures on nondurable goods.

On the international scene, the weakness of the Japanese economy continues to depress foreign GDP growth. However, the Chinese and some of the far eastern economies are booming, Europe is on course for a modest recovery, and the Mexican economy is now more stable. Overall, foreign GDP growth, according to WEFA forecasts, is expected to be 2.1 percent in 1995, 2.5 percent in 1996, and 2.6 percent in 1997. This

modest growth, accompanied by a weaker dollar and a slower increase in the US unit labor cost, will lead to robust growth in US real exports. WEFA projects real growth to be 9.2 percent and 8.8 percent, respectively, in 1996 and 1997, after very strong growth of 10.8 percent in 1995. The corresponding DRI/McGraw Hill forecasts are 8.8 percent for 1996 and 9.9 percent for 1997. During 1995 imports grew rapidly at 11.1 percent—mainly due to large imports of capital goods. However, as equipment investment slows down, so will import growth, which, according to WEFA projections, is expected to be 6.9 percent in 1996 and 6.1 percent in 1997. DRI/McGraw Hill projects slightly higher rates, 8.3 percent and 6.8 percent in 1996 and 1997. One measure of the internationalization of the US economy is that exports and imports, both in absolute terms and as shares of real GDP, have been steadily increasing over time. Chart 3 plots the exports and imports as a share of real GDP. Exports have risen from 6.4 percent of GDP and imports from 7.5 percent in the early 1970s to about 13.2 percent and 15.4 percent, respectively, during 1995. There is a misconception that most of the recent increases in exports are due to service exports. Many observers overlook the growth in merchandise exports, which have grown very

Chart 3. US Exports and Imports as a Percent of Gross Domestic Product



rapidly, triggered by exports of capital goods such as computer hardware. As a share of GDP, merchandise exports grew 10.0 percent in 1995, and they are expected to grow at 11.0 percent and 12.0 percent during the next two years. On the other hand, growth of the share of service exports have remained at 3.0 percent since 1990 and are projected to stay around that rate for the next few years.

## The Illinois Economy

### Employment

Employment in Illinois will grow at a slightly slower rate over the forecast period (see Chart 4). Total non-agricultural employment growth will increase from 1.8 percent in 1994 to 2.4 percent in 1995 and decrease to 0.6 percent in 1996 and increase to 1.0 percent in 1997. The decrease in the forecast of total non-agricultural employment growth in 1996 can be explained by decreases in the growth of goods-producing industries. This slower growth is mitigated by steady growth in service-producing industries.

Employment growth in the goods-producing sector of the Illinois economy will decline in 1996 and 1997. Growth in this sector is projected to decrease from 2.6 percent in 1995 to 0.6 percent and 0.4

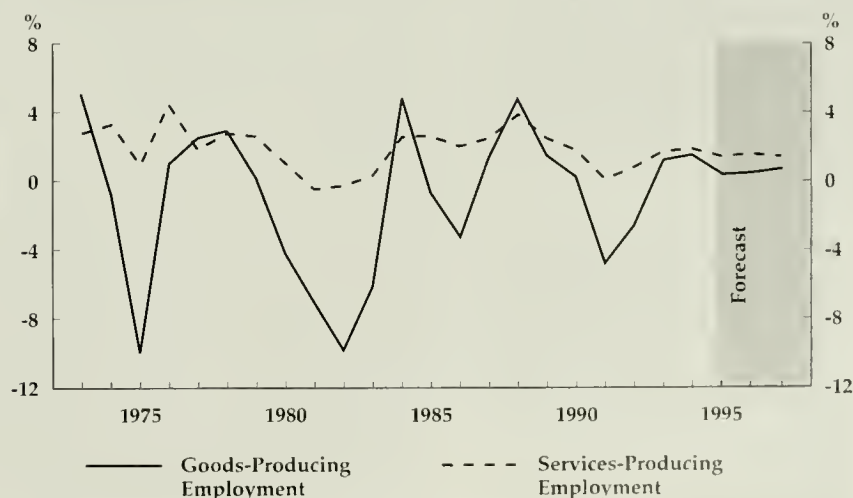
percent in 1996 and 1997, respectively. Construction employment is expected to grow by 5.4 percent in 1995, and then growth will slow down to 2.4 and 1.4 percent in 1996 and 1997.

The slower growth expected in employment is likely the result of decreased growth in manufacturing. Manufacturing consists of approximately 17.0 percent of the Illinois economy, so changes in the employment growth in this sector are likely to have significant effects on the growth of total nonagricultural employment. The IEM projects total manufacturing employment growth

of only 0.1 and 0.3 percent in 1996 and 1997, respectively, after stronger growth of 2.1 percent in 1995. Durable manufacturing employment is expected to expand 3.5 percent in 1995, but it will contract 0.3 percent in both 1996 and 1997. Nondurable manufacturing employment growth of 0.2 percent in 1995, and 0.8 and 1.2 percent are anticipated in 1996 and 1997. It should be noted that goods-producing industries make up approximately 21.0 percent of the total employment in the Illinois economy. Thus, even though growth in employment in manufacturing-related industries is expected to decline, a substantial portion of the economy—the service producing sector—will experience robust growth.

The services-producing sector accounts for nearly 80 percent of state employment. Growth in this sector has a significant impact on the employment growth in the Illinois economy. The IEM projects employment growth in services-producing industries of 2.3 percent in 1995 and 0.6 percent and 1.1 percent for 1996 and 1997. Employment growth in wholesale trade (approximately 6 percent of the total statewide employment) is expected to grow at 2.3 percent in 1995 and 0.2 percent both in 1996 and 1997. Retail trade is expected to grow at 1.0 percent in both

Chart 4. Illinois Goods- and Services-Producing Employment Growth





1995 and 1996, and then grow 1.1 percent in 1997. Finance, insurance and real estate is expected to grow 2.8 percent in 1995 but is expected to grow only 0.2 percent in 1996 and then decrease 0.2 percent in 1997. The largest sector in the services-producing industries is the service sector. This category is a catch-all subsector that includes industries such as services related to business, health, legal, engineering, management, and others. This subsector constitutes approximately 28 percent of the Illinois employment. The IEM projects robust growth in services of 3.7 percent for 1995, and then 1.9 percent and 2.4 percent in 1996 and 1997, respectively. This steady expansion is the source of the robust growth in services-producing industries. Growth in this sector appears to compensate for the slight decrease in growth in goods-producing industries. Government employment is expected to grow 0.5 percent in 1995, contract 0.9 percent in 1996, and then its level is expected to remain unchanged in 1997. As this sector is relatively small (just over 14 percent of the Illinois economy) such meager growth will not contribute much to the decrease in growth in the overall employment level.

State employment growth in services is consistent with forecasts of the national economy run by the WEFA group. Robust employment growth is projected with most new jobs created in the service sector. These employment growth patterns are consistent with the shift in the Illinois economy towards the service industries.

### *Personal Income*

Real total personal income (income adjusted for inflation) will grow 4.2 percent in 1995. A slight decrease in growth can be expected as the IEM projects 3.8 percent and 3.0 percent growth for 1996 and 1997. Growth in Illinois personal income follows closely the growth pattern of US GNP (see Chart 1). Nonagricultural



personal income is expected to grow at a slightly lower rate than personal income as a whole. This implies positive growth in the agricultural sector. However, since the IEM does not forecast the agricultural sector directly, one must exercise caution in drawing such inferences from the aggregate series.

Growth in total nonagricultural personal income is expected to be 4.2 percent in 1995. The IEM forecasts 3.0 and 2.8 percent growth in nonagricultural personal income for 1996 and 1997. The increased growth in personal income is especially significant as the forecasts are adjusted to take into account the effects of inflation. The relatively high rate of growth shown in personal income in 1995 may be due to the fact that inflation has been lower than expected.

Income growth in goods-producing industries is expected to reach 4.9 percent in 1995. This will be followed by growth of only 2.0 percent in 1996 and 1997. Income in manufacturing industries will expand 5.1 percent in 1995 but growth will decline to 2.6 percent in 1996 and then will increase slightly to 2.9 percent in 1997. Income growth in durable manufacturing is forecast to be 7.2 percent in 1995 followed by a decline in growth to 2.5 and 2.2 percent in 1996 and 1997. On the other hand, income in

non-durable manufacturing is projected to grow at a slow rate of 1.9 percent in 1995, but the growth will steadily increase to 2.7 percent in 1996 and 4.0 percent in 1997. Since durable manufacturing is a larger portion of the statewide economy—approximately 9 percent versus non-durable at 6 percent—the decrease in growth has a slightly stronger effect on the growth of manufacturing income as a whole.

As was the case for employment, much of the growth in total personal income is the result of increases in growth in the services-producing industries. Real personal income in the services-producing sector has been growing steadily after a drop in growth in 1993. Personal income is expected to expand 4.7 percent in 1995. The growth, however, will decrease to 3.4 percent in 1996 and will further taper off to 3.1 percent in 1997. Wholesale trade shows the strongest growth with forecasts of 6.8 percent in 1995, but the growth will slow down gradually—to 4.0 percent in 1996 and 2.7 percent in 1997.

Incomes in finance, insurance, and real estate are expected to expand steadily over the forecast period. Growth is projected to be 3.7 percent in 1995 and then 3.5 percent in both 1996 and 1997. Steady growth is

expected for the largest component of the services-producing sector. Services are expected to expand at 4.8 percent in 1995, then slightly increase to 5.0 percent in 1996 and decrease to 4.5 percent in 1997. As this sector contributes one-fifth of the total personal income in the state economy, it is not surprising that its growth will have a positive influence on the growth of the aggregate income.

### Gross State Product

Real gross state product (GSP), the total inflation-adjusted value of all goods and services produced in the state, will grow at 4.2 percent in 1995 and 1996. The growth rate will decrease to 2.5 percent in 1997. The decrease in growth seems to be the result of declines in the growth of both goods-producing and services-producing industries.

Goods-producing industries will experience growth of 4.9 percent in 1995, followed by an expected increase of 1.9 percent in 1996 and 1997. Growth in services-producing industries will decline, but more slowly. It will grow 4.9 percent in 1995 followed by 3.7 percent and 3.4 percent in 1996 and 1997, respectively. Durable manufacturing is expected to expand 5.9 percent in 1995 and then drop to 1.4 percent and 2.1 percent in the next two years. The behavior of growth in GSP is similar in most major sectors of the economy, except in services, which will grow steadily throughout the forecast period.

### Consumer Spending

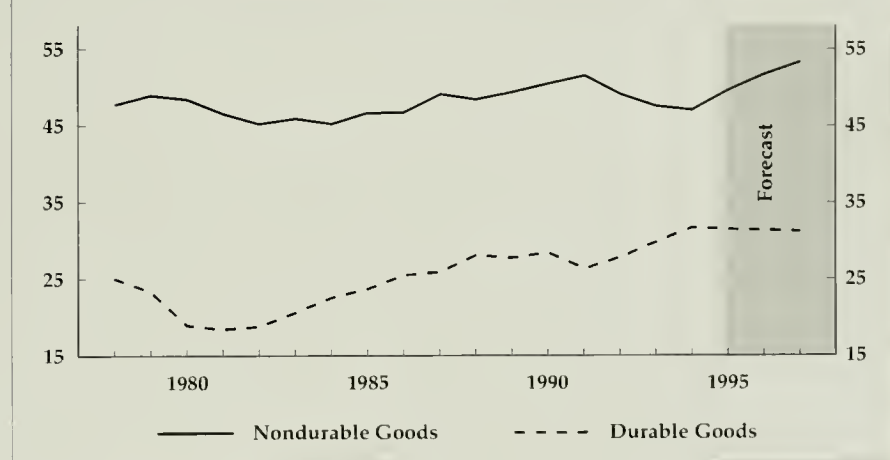
Consumer spending, as measured by retail sales, is projected to grow moderately. Growth of 2.9 percent is forecast for 1995 followed by 3.2 percent and 2.6 percent for 1996 and 1997. The slight increase in spending is explained by the increase in spending on nondurable goods. Growth of 4.1 percent is projected for 1995, followed by a growth of 5.6 percent in 1996 and 3.2 percent in 1997. Sales of durable goods are projected to grow at only 1.1 percent in 1995. This increase is followed by a 0.5 percent contraction and 1.6 percent expansion in 1996 and 1997, respectively. This sales pattern of durable goods may indicate that consumers are now cautious about buying big-ticket items after a spending spree during 1992-1994. However, expenditures on nondurable goods are projected to be 50 percent

higher than those on durable goods; a somewhat robust growth of the total retail sales is still expected (Chart 5).

### Conclusion

In summary, as in the case of the national economy, the Illinois economy will follow the no-boom-no-bust scenario. In terms of employment growth, Illinois lags behind the US economy in 1995, and the Illinois forecasts are for lower growth for 1996 and 1997 compared with the US figures. However, when it comes to real gross product, the Illinois economy will grow at a slightly higher rate than the national economy. Once again, it is the services industry that provides the impetus for growth for both the national and state levels in terms of producing income and generating employment.

Chart 5. Real Illinois Retail Sales (billions of dollars)



# Forecast Statistics

## Illinois Employment (in thousands)

	1991	1992	1993	1994	1995	1996	1997
<b>Total Nonfarm Employment</b>	<b>5,222.6</b>	<b>5,226.4</b>	<b>5,308.4</b>	<b>5,405.5</b>	<b>5,535.4</b>	<b>5,570.1</b>	<b>5,624.9</b>
% change	-1.1	0.1	1.6	1.8	2.4	0.6	1.0
<b>Goods Producing Industries</b>	<b>1,155.7</b>	<b>1,125.5</b>	<b>1,139.1</b>	<b>1,149.0</b>	<b>1,179.3</b>	<b>1,186.6</b>	<b>1,191.9</b>
% change	-4.7	-2.6	1.2	0.9	2.6	0.6	0.4
Mining	18.5	17.4	15.3	15.5	15.0	15.7	15.4
% change	-6.0	-6.1	-11.8	1.1	-3.1	5.0	-2.1
Construction	204.9	196.9	198.2	203.2	214.2	219.4	222.4
% change	-6.9	-3.9	0.7	2.5	5.4	2.4	1.4
Manufacturing	932.3	911.2	925.5	930.3	950.0	951.5	954.1
% change	-4.2	-2.3	1.6	0.5	2.1	0.1	0.3
Durable Manufacturing	552.9	534.7	544.2	548.1	567.2	565.7	563.9
% change	-6.4	-3.3	1.8	0.7	3.5	-0.3	-0.3
Nondurable Manufacturing	379.3	376.5	381.4	382.2	382.8	385.7	390.2
% change	-0.9	-0.7	1.3	0.2	0.2	0.8	1.2
<b>Service Producing Industries</b>	<b>4,067.0</b>	<b>4,100.9</b>	<b>4,169.3</b>	<b>4,256.5</b>	<b>4,356.2</b>	<b>4,383.6</b>	<b>4,433.0</b>
% change	0.0	0.8	1.7	2.1	2.3	0.6	1.1
Transportation and Public Utilities	304.4	302.8	309.9	313.2	322.7	325.3	326.2
% change	-1.3	-0.5	2.3	1.1	3.0	0.8	0.3
Wholesale Trade	354.8	345.9	338.4	340.3	348.2	348.8	349.6
% change	-1.4	-2.5	-2.2	0.6	2.3	0.2	0.2
Retail Trade	892.7	889.8	906.1	935.6	944.5	944.2	954.6
% change	-1.2	-0.3	1.8	3.3	1.0	0.0	1.1
Finance, Insurance and Real Estate	377.5	378.4	382.1	387.5	398.3	399.2	398.5
% change	-0.4	0.2	1.0	1.4	2.8	0.2	-0.2
Services	1,366.9	1,409.9	1,464.7	1,502.4	1,558.6	1,588.9	1,626.6
% change	1.4	3.1	3.9	2.6	3.7	1.9	2.4
Government	770.6	773.9	768.1	777.5	783.8	777.1	777.4
% change	0.6	0.4	-0.7	1.2	0.8	-0.9	0.0

## Real Gross State Product (in millions of 1987 Dollars)

	1991	1992	1993	1994	1995	1996	1997
<b>Total Gross State Product</b>	<b>228,520</b>	<b>243,434</b>	<b>244,332</b>	<b>257,087</b>	<b>267,814</b>	<b>278,997</b>	<b>285,998</b>
% change	-3.4	6.5	0.4	5.2	4.2	4.2	2.5
<b>Goods Producing Industries</b>	<b>56,913</b>	<b>57,634</b>	<b>59,256</b>	<b>62,895</b>	<b>65,958</b>	<b>67,208</b>	<b>68,505</b>
% change	-2.9	1.3	2.8	6.1	4.9	1.9	1.9
Mining	1,287	1,260	1,127	1,123	1,123	1,142	1,121
% change	-2.7	-2.1	-10.6	-0.3	0.0	1.7	-1.8
Construction	10,184	9,863	10,031	10,843	11,424	11,484	11,362
% change	-7.4	-3.2	1.7	8.1	5.4	0.5	-1.1
Manufacturing	45,442	46,511	48,098	50,929	53,411	54,582	56,021
% change	-1.8	2.4	3.4	5.9	4.9	2.2	2.6
Durable Manufacturing	22,925	23,180	23,843	25,842	27,361	27,741	28,327
% change	-5.5	1.1	2.9	8.4	5.9	1.4	2.1
Nondurable Manufacturing	22,517	23,331	24,255	25,087	26,050	26,841	27,694
% change	2.2	3.6	4.0	3.4	3.8	3.0	3.2
<b>Service Producing Industries</b>	<b>179,554</b>	<b>186,753</b>	<b>194,017</b>	<b>201,561</b>	<b>211,481</b>	<b>219,396</b>	<b>226,865</b>
% change	1.8	4.0	3.9	3.9	4.9	3.7	3.4
Transportation and Public Utilities	24,507	25,218	26,197	27,278	28,659	29,736	30,697
% change	1.4	2.9	3.9	4.1	5.1	3.8	3.2
Wholesale Trade	20,519	21,243	21,789	22,381	23,412	24,346	25,229
% change	3.2	3.5	2.6	2.7	4.6	4.0	3.6
Retail Trade	20,911	21,381	21,927	22,888	24,476	24,977	25,362
% change	-1.2	2.3	2.6	4.4	6.9	2.0	1.5
Finance, Insurance and Real Estate	41,880	43,609	45,381	47,160	49,115	50,647	52,102
% change	1.2	4.1	4.1	3.9	4.1	3.1	2.9
Services	49,916	52,902	55,802	58,633	62,055	65,506	68,890
% change	3.1	6.0	5.5	5.1	5.8	5.6	5.2
Government	21,821	22,400	22,923	23,221	23,765	24,182	24,585
% change	1.9	2.7	2.3	1.3	2.3	1.8	1.7



*Real Personal Income (in millions of 1987 dollars)*

	1991	1992	1993	1994	1995	1996	1997
Total Personal Income	201,915	208,872	213,421	221,156	230,538	239,282	246,486
% change	-0.9	3.4	2.2	3.6	4.2	3.8	3.0
Total Nonfarm Personal Income	147,306	152,366	156,085	162,738	169,649	174,812	179,661
% change	-0.5	3.4	2.4	4.3	4.2	3.0	2.8
Goods Producing Industries	39,597	39,935	40,702	43,146	45,258	46,179	47,085
% change	-4.0	0.9	1.9	6.0	4.9	2.0	2.0
Mining	821	801	681	723	721	742	714
% change	-2.1	-2.4	-15.1	6.3	-0.4	2.9	-3.8
Construction	8,234	8,016	8,195	8,917	9,334	9,321	9,199
% change	-8.3	-2.6	2.2	8.8	4.7	-0.1	-1.3
Manufacturing	30,542	31,118	31,827	33,506	35,203	36,116	37,172
% change	-2.9	1.9	2.3	5.3	5.1	2.6	2.9
Durable Manufacturing	17,858	17,851	18,386	19,804	21,235	21,774	22,259
% change	-5.2	0.0	3.0	7.7	7.2	2.5	2.2
Nondurable Manufacturing	12,683	13,266	13,441	13,702	13,968	14,342	14,913
% change	0.6	4.6	1.3	1.9	1.9	2.7	4.0
Service Producing Industries	107,022	111,721	114,645	118,794	124,392	128,633	132,576
% change	0.9	4.4	2.6	3.6	4.7	3.4	3.1
Transportation and Public Utilities	10,897	11,268	11,677	12,231	12,827	13,101	13,345
% change	-0.2	3.4	3.6	4.7	4.9	2.1	1.9
Wholesale Trade	12,010	12,179	11,964	12,365	13,208	13,743	14,115
% change	-1.2	1.4	-1.8	3.4	6.8	4.0	2.7
Retail Trade	13,103	13,387	13,660	14,219	15,132	15,284	15,452
% change	-1.6	2.2	2.0	4.1	6.4	1.0	1.1
Finance, Insurance and Real Estate	12,612	13,916	14,294	15,056	15,616	16,164	16,732
% change	2.2	10.3	2.7	5.3	3.7	3.5	3.5
Services	38,706	40,733	42,419	44,068	46,190	48,478	50,650
% change	1.3	5.2	4.1	3.9	4.8	5.0	4.5
Government	19,693	20,238	20,631	20,855	21,417	21,864	22,281
% change	2.9	2.8	1.9	1.1	2.7	2.1	1.9

*Real Illinois Retail Sales (in millions of 1987 dollars)*

	1991	1992	1993	1994	1995	1996	1997
Total Retail Sales	78,021	77,039	77,555	79,046	81,317	83,894	86,088
% change	-1.3	-1.3	0.7	1.9	2.9	3.2	2.6
Durable Goods	26,463	27,831	29,938	31,954	32,290	32,134	32,645
% change	-6.9	5.2	7.6	6.7	1.1	-0.5	1.6
Nondurable Goods	51,558	49,208	47,617	47,092	49,027	51,761	53,443
% change	1.9	-4.6	-3.2	-1.1	4.1	5.6	3.2

The sustained growth of the Illinois economy in recent years, including 1995, has produced an improved state budget picture, one that is expected to continue into 1996. While the short-term fiscal prospects for the state remain good, Illinois faces longer-term fiscal problems over the next decade. Pressures for increasing expenditures that will come from the needs of a variety of state programs in areas such as health care, corrections, and aid for children at risk will likely outpace the expected growth in state revenues. This means that Illinois will continue to face a number of difficult choices concerning budget priorities as well as questions about the need to increase state tax revenues. These questions will be complicated by a major restructuring of federal-state relations that will involve a substantial reduction in the growth of federal aid to state and local governments.

### 1995 in Review

The strength of the Illinois economy generated an increase in total state source general funds revenues of over 4 percent in real (inflation-adjusted) terms in fiscal 1995 (July 1994 through June 1995) over 1994 without any major new taxes or tax rate increases. This followed a similar increase in fiscal 1994. These revenue gains led to a substantial improvement in the state's budget for the last three years as compared with the lean period of the early 1990s. The state has reversed the recession-induced deficits for 1990 through 1992 with three years of surpluses (see Chart 1).

The state's two most important revenue sources, the individual income tax and the sales tax, both posted strong performances the last two years (Chart 2). After growing at adjusted annual rates of between 1 and 2 percent from 1990 through 1993, individual income tax receipts,

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*The economic expansion of recent years has led to a substantial improvement in the state's fiscal health.*

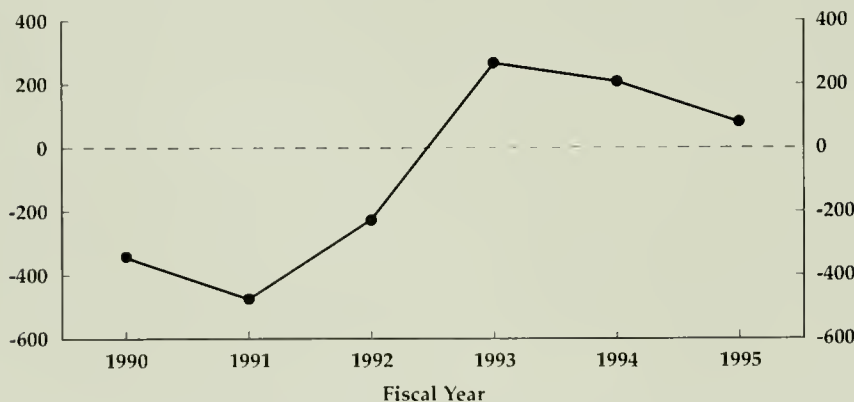
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adjusted for inflation, increased at 4.8 percent in 1994 and 6.3 percent in 1995. Adjusted sales tax receipts, which actually declined from 1990 through 1993, grew at over 3.5 percent in the last two years.

The resurgence of corporate tax receipts has been even more impressive. After a major decline in 1990 and 1991, collections of corporate taxes increased by around 16 percent in real terms in both fiscal 1994 and 1995. Surprisingly, inflation-adjusted federal revenue to the state has also increased substantially during the 1990s.

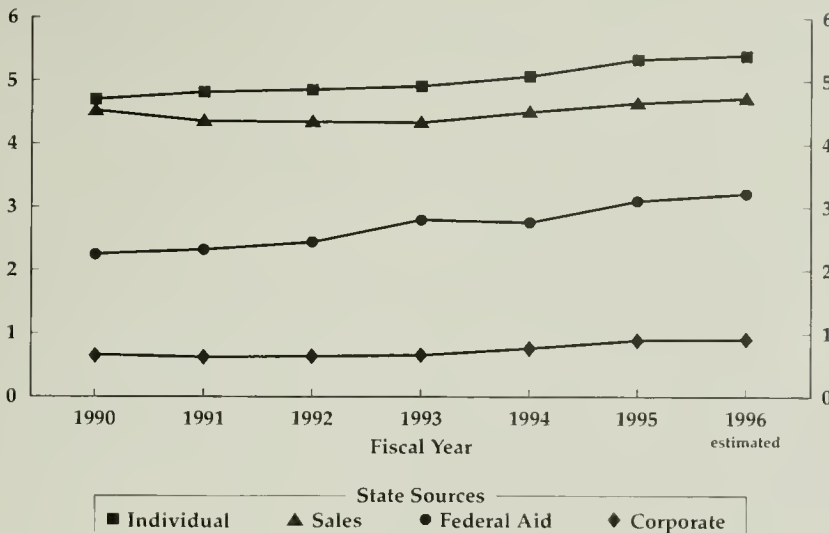
The economic expansion of recent years has led to a substantial improvement in the state's fiscal health. In addition to the deficits of the early 1990s, the state had also built up a substantial backlog of unpaid Medicaid bills to health care providers not reflected in the deficit figures. Medicaid, a program that provides health care for low-income citizens including welfare recipients, the disabled, and the elderly in long-term care, is administered by the state and financed jointly by the federal and

Chart 1. Recent Surpluses and Deficits (current dollars in millions)



Source: Comptroller's Monthly Fiscal Report, July 1994 and End of Fiscal Year Financial Report, July 1995. Surplus or deficit is revenue less expenditures less change in lapse period spending.

Chart 2. General Fund Revenues by Major Source (billions of constant 1995 dollars)



Source: Comptroller's Monthly Fiscal Report, July 1994  
End of Fiscal Year Financial Report, July 1995, Bureau of the Budget Report

moderate tax state. Meaningful comparisons of taxes among states must be based on combined state and local taxes rather than state taxes alone, since states vary greatly in which level of government provides different services. For 1993 (the most recent year for which data is available for comparison), Illinois ranked sixteenth highest among the states in per capita state and local tax revenues at 101 percent of the national average. However, tax revenues in Illinois as a percentage of state income was only thirty-third highest among the states, at 83 percent of the national average. Note that Illinois has a relatively high income, ranking tenth nationally—which accounts for differences between the measures based on per capita taxes and taxes as a percentage of income.

## The Prospects for 1996

Most observers expect continued, although possibly moderating, growth for Illinois and the nation in calendar year 1996. For the first five months of fiscal 1996, state revenues are slightly ahead of projections made at the beginning of the period, in July. The state should experience

state governments. At its peak, the backlog in Medicaid payments amounted to over \$1.5 billion by some estimates. Fortunately, the state has made substantial headway in reducing outstanding bills without the need to raise any major taxes.

There is hope that the problem of overdue Medicaid bills can be effectively eliminated by the end of fiscal 1996 (June 1996). This is the result of several factors. First, the state has made efforts to control Medicaid cost increases by encouraging more recipients to enter managed care arrangements where costs can be better controlled. The state has also been able to hold down increases in reimbursement rates to providers during a period in which inflation in medical care costs has been reduced substantially nationwide. The rate of increase in medical care prices for the last year (1994) was 4.9 percent, the lowest in the last 20 years. Finally, it must be remembered that state funds are matched on a roughly one-to-one basis with federal aid, which provides substantial leverage for additional state dollars directed to reduce the payment backlog.

As noted earlier, there were no major changes in tax policy in the last year. After over two years of debate, casino gambling has not been approved for Chicago and Cook County. Similarly, reformers hoping to change the state's system of educational finance by reducing the reliance on local property tax revenues for schools with a substantial infusion of state aid generated by a state-level tax increase have made no headway. A commission, appointed by Governor Jim Edgar, is now addressing educational funding and is expected to produce a set of recommendations in the spring of 1996. However, it is unlikely that any substantial changes will actually be implemented until at least the 1997 legislative session.

Illinois remains, in comparison with other states, a low to

The image shows a stack of Illinois Department of Revenue forms. The top form is IL-4852 Substituted for Unobtainable Form W-2. Below it is IL-1040-X, and at the bottom is the 1995 IL-1040 Individual Income Tax Return. The forms are partially overlapping, showing various sections like 'Taxpayer Information', 'Income', and 'Tax Calculation'.



continued real revenue growth through fiscal 1996 and into 1997. With growth in expenditures, including Medicaid, at least temporarily under control, the short-term state fiscal picture is relatively bright. In addition, the major changes at the federal level that will eventually have an impact on state aid are not likely to be felt in Illinois for another year.

On the negative side, it must be noted that it has taken three years of strong revenue growth for the state to work itself out of the problems encountered in the early 1990s. Illinois is only now on a relatively sound fiscal footing. Unfortunately, the state has not accumulated a margin of resources to meet any future problems such as a recession or substantial reductions in expected federal aid.

On the legislative front, 1996 is likely to be a quiet year. Since it is an election year, major tax increases are not expected. As noted earlier, reforms in education and property taxes are unlikely until 1997 at the earliest. With Republican control of both houses of the General Assembly, an early resolution of the state budget can be expected as in 1995.

### Longer-Term Issues

While the short-term prospects for the state remain good, the longer-term outlook is less sanguine. A recent study conducted by several members (including the author) of the Institute of Government and Public Affairs at the University of Illinois at Urbana-Champaign found that the State of Illinois faces a structural deficit over the next 10 years. A structural deficit is defined as a situation in which if the current structure of spending programs and revenue sources remain constant, long-run projected expenditures will exceed long-run projected revenues. To put it differently, a structural deficit will eventually occur when the expected, long-run annual growth rate of expenditures exceeds

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*The forecast  
projects expenditures  
to grow at a rate of  
2 percent above  
inflation each year  
while revenues are  
expected to grow at  
only 1 percent above  
inflation annually.*

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the long-run annual growth rate of revenues under existing policies.

The results of this study suggest that state government will face a \$1.8 billion structural deficit (in 1995 dollars) in 2005, which would equal 9.5 percent of projected revenues a decade from now (Chart 3). This conclusion is based on a set of reasonable assumptions about economic and demographic changes in Illinois over the next ten years. These assumptions include a 1.9 percent growth in real personal income growth in Illinois, with the projected growth rate of each state revenue source based on its historic relationship to growth in personal income.

Projections of expenditures are based on recent growth rates for particular programs as well as expected changes in the target populations served by state government. For example, the growth rates for corrections and education include projections for changes in school-age and prison populations while assuming constant inflation-adjusted levels of support per person served.

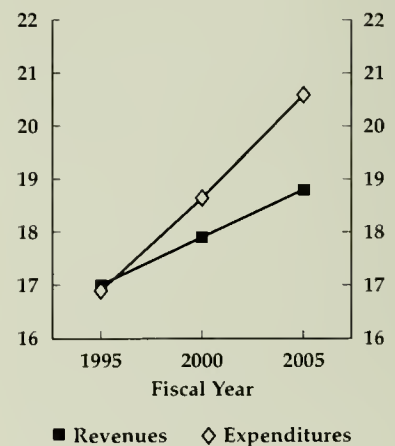
The forecast projects expenditures to grow at a rate of 2 percent above inflation each year (from \$16.9 billion in 1995 to \$20.6 billion in 2005) while revenues are expected

to grow at only 1 percent above inflation annually (from \$17 billion in 1995 to \$18.8 billion in 2005). Both existing revenue and expenditure policies contribute to the Illinois dilemma. Expenditures for several current state programs are expected to increase rapidly because the populations being served are increasing. For example, the number of prison inmates, abandoned and abused children, and the elderly and disabled are all expected to increase significantly.

While the state's revenues are expected to grow in real terms, natural revenue growth is unlikely to keep pace with expected expenditures. This creates the persistent gap between expenditure demands and state revenues. For example, while the state income tax keeps pace with economic growth and the sales taxes grows in real terms, other taxes such as the utility taxes, cigarette and liquor taxes are expected to decline in real terms.

The projected deficit is not likely to actually occur in future years because the state will be forced to take action to close the gap. Unlike the federal government, the state cannot run continuing large deficits. In general, the deficit can be made up by

Chart 3. Projected Revenues and Expenditures (billions of constant FY95 dollars)



increasing the growth rate of revenues, reducing the growth of expenditures, or some combination of the two.

Revenues can be increased by occasional periodic tax rate increases or other piecemeal responses or by making changes in the tax structure to make it more responsive to growth. Illinois has coped with past such deficits by increased income tax rates, underfunding the state's pension systems, and delaying payments to health-care providers. In other words, the state has been using short-term strategies to deal with a long-term, persistent problem. The other option, reducing the rate of growth of expenditures, is also problematic. Spending cuts are likely to entail real pain to many of the populations served by state government.

In response to past deficits, the state has responded by cutting the share of state resources going to existing programs (most notably education) to fund areas where demands for services have increased rapidly. Chart 4 shows the reallocation of state spending over the past several decades in response to these pressures. Note the reduction in the



share going for education, in part at least, in response to increases in Medicaid and corrections.

The conclusions of the study on the coming structural deficit is not that the state is heading toward bankruptcy. Instead, it suggests that

Illinois will face some difficult choices in the upcoming years and that it is preferable to address these challenges with long-run planning and strategy rather than the purely reactive stance that has often been relied on in the past.

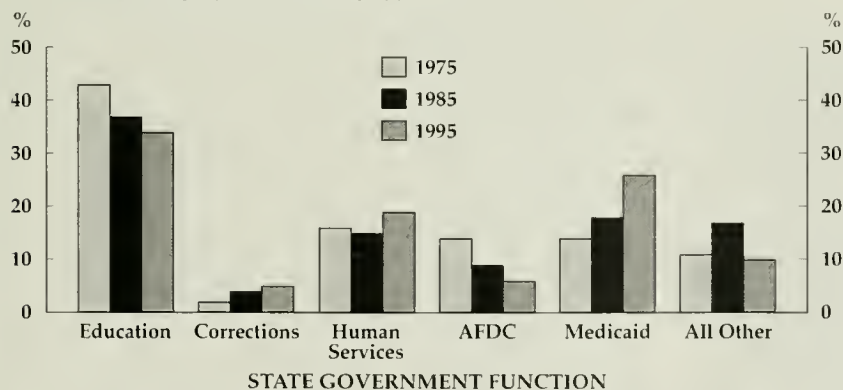
On a somewhat more optimistic note, the changes at the federal level that will be implemented to eliminate the federal deficit over the next seven years may not have as dramatic a negative impact on the state of Illinois as many observers predict. These changes in federal budget policy do promise a major realignment of federal interactions with the states that will reduce the rate of growth of federal aid. Federal restrictions on the use of this aid will be lessened through the expansion of block grants that will allow states more discretion in the use of these funds.

However, the increased flexibility is unlikely to compensate fully for the reduced funding. States such as Illinois will be forced either to raise their own taxes substantially to maintain programs or to make painful cuts.

This appraisal, however, is unduly negative with regard to Illinois because it concentrates only on the fiscal position of the state government and not on the relative position Illinois citizens. To eliminate the federal deficits in the future, the federal government must either reduce the rate of growth of expenditures or enact a major increase in federal taxes. For the people of Illinois, who pay a disproportionate share of federal taxes and receive a relatively small share of federal expenditures, cutting federal expenditures is very likely to be more beneficial than an increase in federal taxes.

The Illinois per capita federal tax burden is 15 percent higher than the

**Chart 4. Illinois State General Funds Spending**  
(percentage of total spending by function)



Source: Presentation to the Governor's Commission on Education Funding  
Illinois Bureau of the Budget, July 27, 1995

average for the country as a whole, while it receives approximately 16 percent less than the US average in federal spending. Neither the tax burden nor the expenditure return is necessarily unreasonable or unfair. As a high-income state, it is to be expected that Illinois will pay more per capita than the national average. Similarly, wealthier states expect to receive less per capita for redistributive programs than poorer ones. The fact that Illinois is not a major provider of military equipment or home to a large number of military bases further reduces its share of federal spending.

Preliminary estimates of the impact of federal changes in aid to states indicates that by 2002 Illinois federal aid would fall \$3.8 billion (or 29 percent) below the levels projected under current law. Such a loss of federal aid to the state would result in a drop of about 7 percent of the state's total revenues (including all funds) by 2002.

On the positive side, the reduced federal aid (and other federal cutbacks) would forestall the need to increase federal taxes substantially to balance the budget. This is a significant point to consider for the citizens of Illinois. If federal taxes were increased to maintain the current federal aid programs in 2002 to all state and local governments in the country, the Illinois share of the increased federal taxes would amount to approximately \$5.0 billion, compared with federal aid reductions to the state and local governments in Illinois of \$3.8 billion. The net impact on the state of increased federal taxes would be a net outflow of taxes over aid returned from Washington of \$1.2 billion compared with federal aid cuts. From a narrow perspective, Illinois would be better off to accept the federal aid cuts and to increase state and local taxes to deal with the lost federal revenue.

Federal changes will not be without pain for the state, however. The State of Illinois may not choose to continue all existing programs currently paid for with federal funds by raising state and local taxes. In such a case, the poor in Illinois would suffer disproportionately while higher income residents would benefit from lower taxes. The fact remains, however, that this problem is best addressed directly within the state, where a dollar of taxes collected provides a dollar of benefits to the citizens of the state, as opposed to sending the money to Washington where a dollar of Illinois taxes produces 75 cents in extra revenue for governments in the state. In summary, state efforts to maintain adequate services in response to federal cutbacks are likely to be more productive than futile attempts to stop the changes at the federal level.



## *State Pension Systems: Will They Be Able to Pay?*

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*By 1995, the unfunded liability had increased to over \$19 billion as a result of continued underfunding and generous early retirement programs.*

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Financial debacles hold a fascination for many of us, as we watch enthralled as incomprehensible sums of money disappear due to greed, larceny, or simply stupidity. The savings and loan industry, the Barings Bank failure, Orange County, Mutual Benefit, Lloyd's of London, these are a few major financial shocks we have observed recently. People lose money, or lose access to their money. One's sense of financial security is shaken, especially for those directly involved in the crisis.

More shocks surely lie ahead, but for some there may be advance warning. Knowledgeable observers have long warned of the coming bankruptcy of the Social Security System. There is a committee charged with the annual task of pinpointing the date this system will become insolvent unless changes are made. Perhaps these warnings will be heeded and the necessary changes made to forestall these problems. If not, at least no one will be surprised. But other crises are looming that are not so widely publicized. One potential problem area is state pension systems.

State pension plans are not subject to any federal guidelines regarding funding adequacy. Unlike private pension plans, they are exempt from the funding regulations, and insurance provisions, of the Employee Retirement Income Security Act of 1974 (ERISA). Instead, they are subject only to their own state's

laws and regulations regarding funding. In many states, there are no guidelines. In others, including Illinois, violations of the applicable regulations have gone unpenalized. As a result, the funding levels of different states range dramatically, from almost no funding to funding at a level that covers not only all benefits currently owed, but also some benefits that will be earned in the future.

In addition to the lack of independent oversight in setting and maintaining funding adequacy, another major problem is that there is no widely accepted method of determining the appropriate level of funding. Some argue that since states have the power to tax, any pension shortfall can be covered by future taxation. Proponents of this view also argue that no state has ever defaulted on pension promises. This default-free history, although reassuring, must be placed in some perspective. The first state-administered pension plan covering general state workers was enacted only in 1911, and it generally takes 50 or more years for any pension system to mature and approach its full cost level.



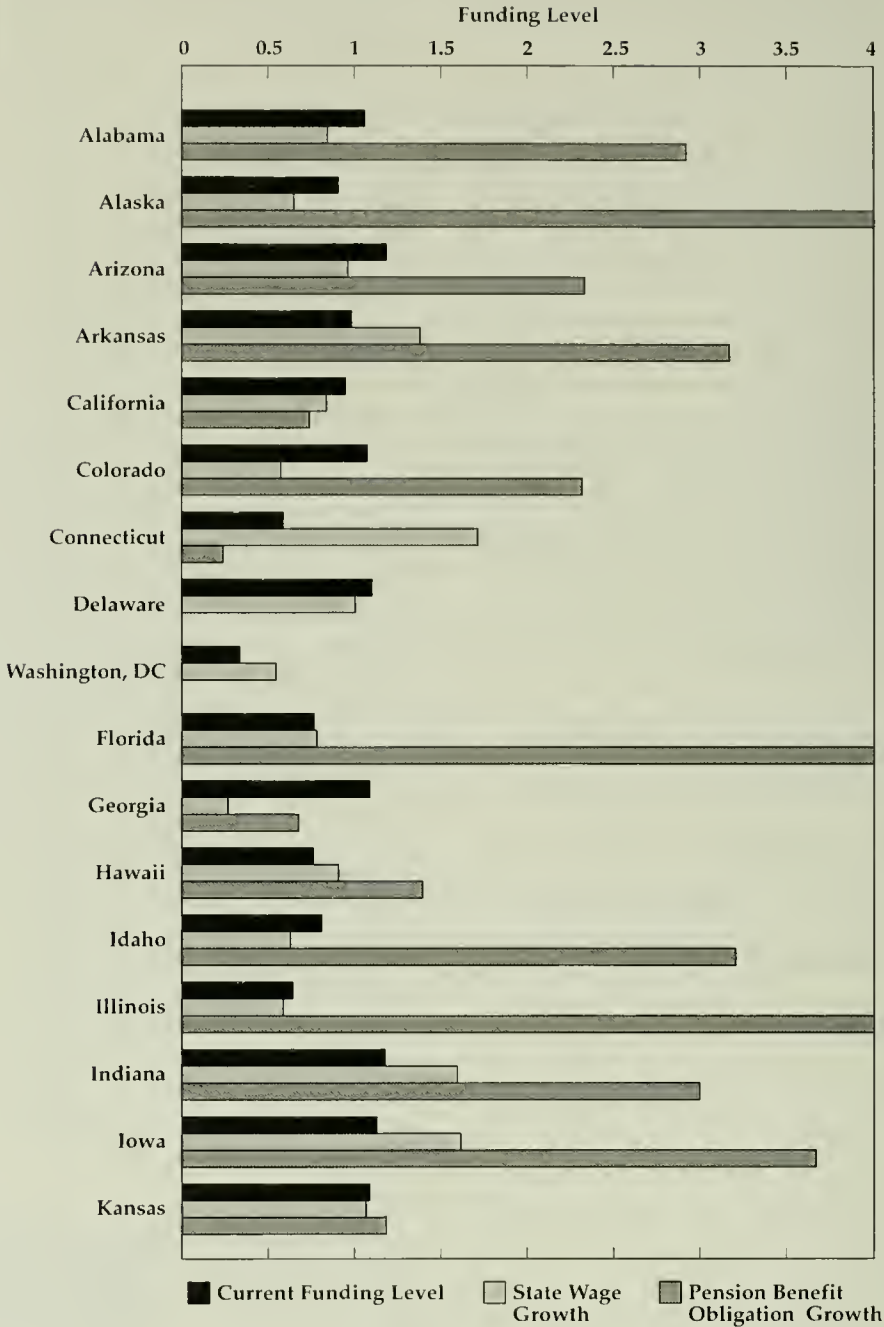
Thus, there really has not been an extensive record of state pension systems attaining their full cost level and then meeting the pension obligations under a wide range of economic conditions.

On the other hand, the argument is raised that a state should pay for the pension benefits earned in the year they are earned, so that the citizens (taxpayers) that benefit from the services provided also bear the cost, rather than shifting that cost to a future generation. Shifting costs to future generations of taxpayers can only be done for so long before the recipients of such a burden decide that they either cannot or will not pay for services they never received. State workers, knowing that a default is possible and that the likelihood of a default is related to the size of the pension deficit, naturally are concerned about the reliability of unfunded pension promises. The economic effects of this concern, such as demands for higher wages to compensate for pension risk, the inability to attract and retain quality workers, lower morale and productivity, are hard to quantify, but likely exist. In addition, the effect of unfunded pension liabilities on the financial ratings of state debt can increase the cost of borrowing across the board for a state with a serious underfunding problem.

Despite the research behind the divergent viewpoints, the issue of a proper funding level for state pension plans is not settled. The costs and benefits from underfunding are difficult to calculate reliably. Deferring costs may save money in the short run, but the future liability created may eventually generate expenses that exceed the immediate gains.

We propose a different approach to state pension funding. Pension expenses represent a cost that the state taxpayers must bear at some time. The least painful method of paying for these benefits would be to pay a constant proportion of taxable

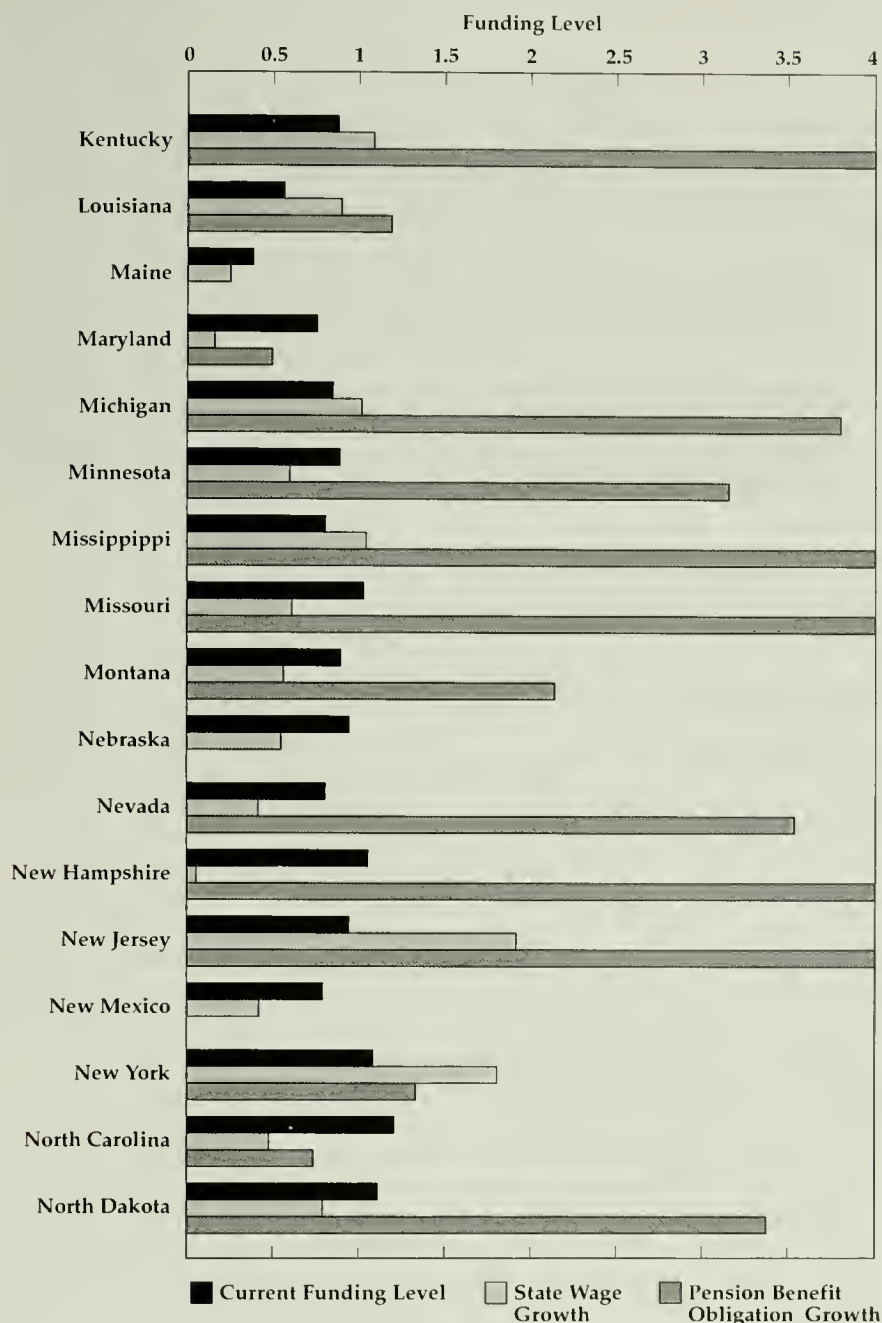
Public Pension Plans: Current/Optimal Funding Levels



income each year. This presumes that the economic gain of reducing the tax rate by, for example, 1 percent is more than offset by the pain of raising it by 1 percent later, even though the later taxpayers may be different people. In economic terms, adjustment factors between generations equal the per capita

income growth rate. Making this assumption, the optimal level of pension funding can be determined for any range of demographic and economic variables.

This model does not produce a universal adequate funding level. Instead, the appropriate funding



level is determined by the interrelationship of the rate of growth of a state's pension benefits, the population growth rate, and the per capita income growth rate. As long as a state's tax base is growing more rapidly than its pension expenses, then underfunding is the optimal

pension funding strategy. However, if pension expenses are growing more rapidly than the tax base, then the pension plan should be over funded. In the case in which pension costs and the growth of the tax base are equal, the optimal funding would be full funding.

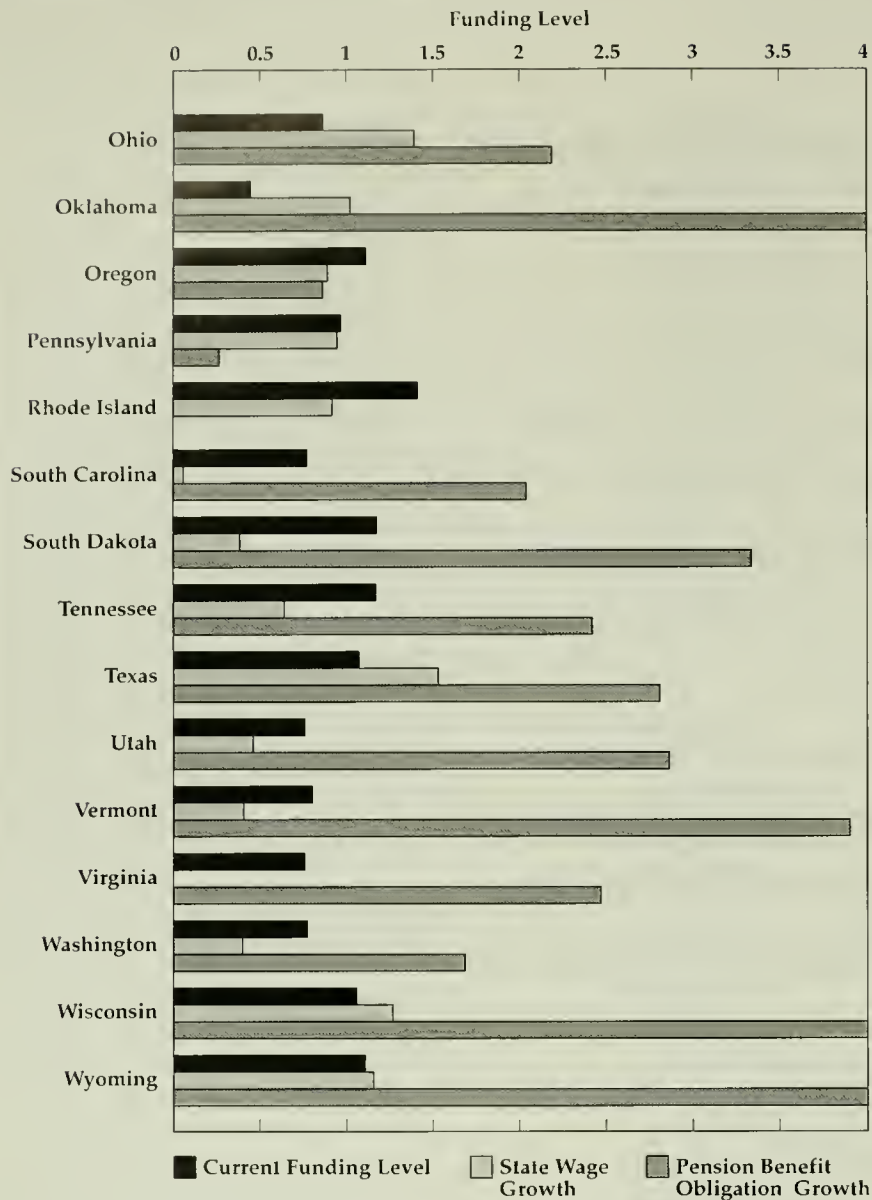
Although the sources of state tax revenue are quite varied, with personal and business income taxation, sales and use taxes, licenses, and fees on particular products among other sources of tax revenue, the effect of the taxes is borne, in general, by the residents of the state. Thus, the population of a state at a particular time indicates the number of people affected by a state tax, any tax, at that time. Based on the underlying assumption about the impact of taxation, per capita income is the appropriate index to use to measure the base income available for taxation. Combining the population growth rate with the growth in per capita income yields the tax base upon which any tax will be levied. The objective of this procedure is to cover all pension expenses by paying a constant percentage of the tax base.

The tax base is calculated to grow as follows:

$$\text{Tax Base Growth Rate} = \frac{(1 + \text{Population Growth Rate})(1 + \text{Per Capita Income Growth Rate}) - 1}{1}$$

Pension expenses are the total benefits paid to retired state employees. Under a new pension system, no benefits are paid until the covered employees begin to retire. This may take ten or more years if benefits are earned only for service after the pension plan has been established. However, if the plan provides for retroactive service credits, giving current employees credit for the years they worked before the plan was set up, then the first payments will begin almost immediately. Whenever the benefit payments begin, the level of payouts increases each year as more employees retire and begin to collect benefits. If there were no inflation, no increase in the number of covered employees, and no change in the pension plan to provide more generous benefits, then eventually the pension payouts would reach a steady state. Again, depending on the retirement age





specified in the plan and the longevity of beneficiaries, this could take in the range of 15 to 25 years from the first benefit payment. Thus, the steady-state payout pattern is not

likely to occur until well after the plan is established.

Obviously, in the real world the assumptions needed for constant pension payouts (no inflation, no salary increases, and no growth in the number of employees covered) do not occur, especially not all at the same time. Thus, the pension payout will grow each year in line with increases in salary and number of employees. If state salaries are in

line with per capita income within the state and the number of state employees grows with the state's population, then pension costs will grow at approximately the same rate as the state's tax base. However, any benefit enhancements will cause the pension payments to grow at a faster rate.

Public pension plans are now, in general, underfunded. An extensive review of the annual reports of 205 state and local pension plans undertaken by a researcher at the University's Institute of Labor and Industrial Relations indicated that, as of 1992, the average funding ratio was only 85.5 percent.<sup>1</sup> The researcher, James Dulebohn, found that the funding ratios ranged from under 20 percent to 145 percent. Illinois had a funding ratio of only 63 percent, with an unfunded liability in all five of the state pension plans totaling over \$13 billion. By 1995, the unfunded liability had increased to over \$19 billion as a result of continued underfunding and generous early retirement programs. On its face, this situation looks bad. It is usually assumed that full funding, funding at the 100 percent level, is automatically correct. Our research, however, indicates that the proper funding level varies depending on the growth rates of pension expenses, population, and income.

Over the period 1980-1992, the average annual population growth rate across the nation was 0.993 percent. Growth in individual states ranged from -0.72 percent in Washington, D.C., to 4.336 percent in Nevada. Illinois had a population growth rate of 0.135 percent. The per capita income growth rate was 6.046 percent nationally, ranging from 4.057 percent in Alaska to 6.951 percent in New Jersey. In Illinois the growth rate was 5.956 percent. Thus, the tax base growth rate was 7.10 percent nationally  $((1.00993) - 1)$  and 6.10 percent in Illinois  $((1.00135)(1.05956) - 1)$ .

To determine the appropriate funding ratio for a state's pension

<sup>1</sup> For a fuller view, see James Dulebohn, "A Longitudinal and Comparative Analysis of the Funded Status of State and Local Public Pension Plans," *Public Budgeting and Finance*, Vol. 15, No. 2 (Summer 1995), pp. 52-71.



plan, the growth rate for the tax base must be compared with the growth rate for pension expenses. Assuming that pension benefits have not been enhanced, then the growth rate in pension costs will, in the long run, approximate the growth rates in number of employees and average salary. Across the nation, state employment grew at a 1.539 percent rate over the period 1980–1992. The lowest rate was in West Virginia, where the number of state employees fell 1.755 percent annually. The highest rate was in Nevada, where employment increased 3.643 percent per year. In Illinois, the growth rate was 0.592 percent. Nationally, the average salary of state employees grew 5.536 percent per year. The lowest growth was in Wyoming, only 2.831 percent growth per year. The highest rate was in Connecticut, where it increased 8.652 percent per year. The Illinois rate was 5.121 percent. Thus, the long-run pension growth rates would be 7.16 percent

nationally  $((1.01539)(1.05536) - 1)$  and 5.74 percent in Illinois  $((1.00592)(1.05121) - 1)$ .

Based on the national growth rates of 7.10 percent for tax base growth and 7.16 percent for pension plan growth, the optimal funding ratio for a public pension plan would be slightly over full funding. For Illinois, with tax base growth of 6.10 percent and pension growth of 5.74 percent, underfunding, to some degree, would be optimal. However, these pension plan growth rates assume no benefit enhancements or other changes that would increase pension costs faster than the public employees' wage base.

Unfortunately, from a funding perspective, beneficiaries are frequently offered enhancements that end up increasing future pension costs. Over the period 1988 through 1992, based on the annual reports of state public employee pension systems, the pension benefit obligation grew more rapidly than the public employees' wage base in 38 of the 44 states for which information is available. For Illinois, the annual growth rate for the pension benefit obligation was 11.56 percent, well above the growth rates for the tax base (6.10 percent) and public employees' wage base (5.64 percent).

Forecasting the future of pension costs is difficult when legislative action can change those costs at any point. Using the recent past as a guide, however, suggests that many states tend to raise public pension costs faster than the tax base is growing. Based on this behavior, the optimal funding of public pension plans is more than full funding. Instead, public pension plans are now underfunded by approximately 14 percent. The current funding levels will force future taxpayers' to pay a higher proportion of their taxable income to cover public pension costs. This higher tax burden can be resisted by future taxpayers, who are likely to be unwilling to pay for services rendered to prior generations of citizens. The higher tax burdens could prove recessionary, which would slow the growth rate in the tax base and exacerbate the funding problem. Also, the higher tax rates, given that they will vary by state, could induce relocation to states whose public pension plan funding strategy has not led to significant tax increases. These population shifts will adversely affect those states with the most serious underfunding problems while benefitting states that adequately funded public pensions.

The chart shows the current and optimal funding conditions for each state's public pension funds based on two different assumptions about the growth rate of pension expenses. The first assumes that pension expenses increase in line with the growth in the number of employees and salary increases over the period 1980 through 1992. The second assumes that the growth rate in the state's pension benefit obligation over the period 1988 through 1992 continues into the future.<sup>2</sup>

While it is difficult to forecast long-range pension costs accurately, the two estimates represent a range of possible outcomes. The states with current funding levels above both the indicated optimal levels are most likely to be able to avoid future

<sup>2</sup> For details on the method of calculating the optimal funding level, see Pyungsuk Oh, "Optimal Funding of State Public Employee Pension Systems," unpublished dissertation, University of Illinois, 1995.



problems. California, Georgia, Maryland, North Carolina, Oregon, and Pennsylvania are in this position. On the other hand, states with current funding levels below both the indicated optimal levels, including Arkansas, Florida, Hawaii, Indiana, Iowa, Kentucky, Louisiana, Michigan, Mississippi, New Jersey, New York, Ohio, Oklahoma, Texas, Wisconsin, and Wyoming, are very likely to experience funding crises in the future. The future of other states, including Illinois, depends on which of the estimates proves to be more accurate, the long-term wage base or recent growth in pension benefit obligations. Illinois will be in serious trouble if pension expenses grow at the pension-benefit-obligation growth rate, but will be fine if expenses grow in line with state wage growth.

What will happen when a public pension plan goes bankrupt? Although we have no examples in this country on which to base observations, parallels with other financial fiascos provide some indications. If money is not available to pay pensions, then payments will be delayed. Periodic budget deadlocks, in Illinois as well as other states, provide ample evidence that this can occur. If the delays are extensive, then the state may issue checks that cannot be cashed. In this case a secondary market is likely to develop in which pension beneficiaries can exchange their checks for a payment of less than the full face value. The

lower payment would reflect the time value of money and the risk involved in holding the currently uncollectible checks. This represents a de facto pension reduction.

In order to replenish the pension plan, the state will have to provide additional resources. This may be from new revenues (tax increases) or from a redistribution of spending (curtailing other services). A tax increase could affect pension beneficiaries along with all other taxpayers, or could be focused directly on pension beneficiaries. In Illinois, for example, Illinois state pension benefits are exempt from state taxation. This exemption could be eliminated, which would be, in effect, a reduction in benefits. Or the income tax on public pensions could be at a higher rate than the general state income tax rate, in recognition of the fact that paying public pensions created the need for the tax increase. This strategy is especially likely for recipients of public pension benefits who live out of state. On the other hand, curtailing other public services could adversely affect the quality of life for in-state pension beneficiaries, as well as other state citizens. Another possibility would be for the state to retroactively reduce pension benefits, for example, reducing or eliminating periodic benefit increases or withholding a portion of the pension to be paid at a later date. Although in Illinois any reduction in pension benefits for active or retired employees would require a constitutional

amendment, if the funding crisis is severe enough, then this option cannot be ruled out. Whatever approach is taken (delayed payment, reduced benefits, increased taxes) the likely effect will be to decrease the value of the pension benefit for retirees.

What can be done to avoid these potential financial debacles? The logic behind our model is that pension costs should be kept a level portion of taxable income for the state. Since in pension plans expenses are paid many decades after the employee performs the work, small differences in the growth rates of the tax base and pension costs have a very large impact. Thus, restraining the growth of public pension costs by holding the growth rate of number of public employees at or below state population growth, holding salary levels at or below the growth in per capita income, and avoiding pension enhancements can prevent problems. For a state with a tax base growing faster than public employee pension costs, underfunding is the optimal strategy, and one that can continue indefinitely. A little fiscal discipline can go a long way to preventing financial disaster. Given that the legislators and other public officials setting these policies will also be victims of any public pension crisis, there should be an incentive to avoid problems. Unfortunately, no such discipline has been demonstrated to date in most states.



## The Search for a 1995 Agricultural and Food Policy



**W**hy is a major policy development underway in 1995 for the US agricultural and food sector? Simply because the 1990 Act expired on September 30. Every nation must try to assure a stable, economical supply of food and fiber for its very survival. US agricultural and food policy has evolved through successive eras and problems such as land settlement, rural education and the need for production research, credit availability, and orderly marketing. By the twentieth century, we had established the structure for a highly efficient, private, family farm system of production, and a well-organized private system of processing and distribution. This unique partnership between the public through its government and the private sector through entrepreneurship continues to be expressed in the flow of public research, farmer adoption of new technology, the continuous off-farm migration of excess labor, and the

public surveillance of food safety and quality.

The current era of policy for the agricultural sector was ushered in by the disastrous 1920s and 1930s. By the decade following World War II, a series of public policies were in place focused directly on the uncertainty of agricultural production, the variability—and sometimes severe depression—of agricultural prices and income, undernourishment and even unavailability of food for low-income families, conservation of farmland, and the economic importance of agricultural exports.

This bundle of price-income-food-trade policies has gradually evolved through some 20 separate omnibus pieces of legislation leading to the Food, Agriculture, Conservation, and Trade Act of 1990. Yet, unlike policies in some other sectors, such as business incorporation, labor relations, banking, justice, or transportation, none of which have termination dates, agricultural and food policies have always had specified duration of four to five years. The present cycle of policy development happens to fall in a particularly politically turbulent year in which Congress and the White House have repeatedly clashed over their different views of government and society.

As with all public policy in a democracy, controversy swirls around agricultural and food policy. Will the 1995 decision be to eliminate existing programs gradually, to alter current policy substantially, or to continue to evolve agriculture policy through incremental change.

### Determinants of the Policy

Although the compromises that will produce the final 1995 farm bill cannot be predicted, 60 years of history provides valuable insights. The sidebar highlights the primary determinants of US public agricultural and food policy. An assessment of each factor can shed light on the 1995 prospects.

#### Present Policy

Some of the provisions of the 1990 program are likely to survive in the new bill because of the compromise-driven political process. The 1990 Act, with its 25 titles broadly encompassing crops and dairy provisions, several domestic food assistance programs, foreign food aid, agricultural exports, the conservation reserve, the environmental impact of farm production, rural development, and research will be the basis of discussions for change. Particular debate has centered around the extent of the program reductions in commodities and food assistance necessary to achieve the desired reduction in the budget deficit. Furthermore, pressure has been created on price support programs by the implementation of the North American Free Trade Agreement (NAFTA) in January 1994 and the General

#### *Determinants of Public Agricultural and Food Policy*

- Present Policy
- Current Economic Situation
- Knowledge of Participants
- Values/Objectives of Participants
- Relative Influence of Participants

Agreement on Tariffs and Trade (GATT) in January 1995, both of which set US policy on a gradual course toward less government interference in domestic markets and agricultural trade.

### *The Current Economic and Social Situation*

In the setting of new policies, the conditions existing just prior to policy decisions are much more influential than historic trends. Although this year's weather has had very different effects on various areas of the country, agricultural production, prices, and producer incomes have been relatively stable, providing no special impetus for policy change. In particular, commodity supplies have tightened, exports have been strong, and producer incomes have remained steady. However, the need for food assistance by US residents has continued to grow, even with relatively stable levels of overall personal income, because of the definite economic erosion experienced by lower-income families.

### *The Knowledge of Participants*

Reliable information about the consequences of past policies and the expected results of various alternatives increases the effectiveness of all participants in the ag and food policy debate in achieving their objectives. Never before have so many facts, so much analysis, and knowledge of group preferences been available so early or been so widely disseminated as in the case of the 1995 agricultural and food policy.

### *The Values of Participants*

The values—economic, social, psychological or political—of the participants in the decision process directly affect public policy choices. Since the 1990 program, two national elections have demonstrated increased interest in curtailing national budget deficits and lessening government intervention in markets. The 1995 policy is expected to feature reduced

funding for commodity price supports and food programs for the poor and more flexibility for private farm managers to make their own decisions.

### *The Relative Influence of Participants*

Political influence, either directly through proportional voting strength or indirectly through influence on policymakers, always affects policy. Two important changes have occurred since the 1990 Act. The mandatory legislative reapportionment following the 1990 census has marginally shifted political power away from farm and rural interests. Furthermore, communication technology, sophisticated lobbying procedures, and exploding campaign spending have both contributed to the proliferation of interest groups and favored the wealthiest elements of society.

### *The Players and Their Plays*

Many interest groups representing farmers, consumers, agribusiness, environmentalists, conservationists, and others have developed and widely disseminated policy analyses and specific proposals, such as the Illinois Farm Bureau's START (Security for Tomorrow from Agricultural Resources and Technology) plan targeting the goals of food security, environmental security, economic growth, and increased exports. The national Environmental Working Group and Public Voice for Food and Health Policy, among hundreds of other groups, have also issued their proposals.

Public research institutions and private nonprofit think tanks have

*A Budget View of US Farm and Food Policy, FY1995<sup>a</sup>*

Characteristics	Farm Commodity Programs, Total Outlay	Food Assistance Programs, Total Outlay
Total budget outlay	\$10.6 billion	\$38.8 billion
% USDA budget	17	62.3
% US budget	0.8	3.1
% US personal income	0.2	0.6
% US gross farm income	5.3	n.a.
% US consumer food and beverage expenditure	n.a.	5.6
Possible 5% annual budget cut (\$billions)	\$0.5	\$1.9
Possible 18% annual budget cut <sup>b</sup> (\$billions)	\$1.9	\$6.9

<sup>a</sup>Current estimate from 1996 Budget Summary, US Department of Agriculture; Economic Report of the President; and Agricultural Outlook, US Department of Agriculture, August 1995. Total USDA budget, \$62.3 billion.

<sup>b</sup>Total US budget deficit, \$192.5 billion.

produced volumes of background materials and analyses about the emerging alternatives. For example, University of Illinois agricultural economists played leadership roles beginning in 1993 when they published a reference book for leaders on 21 current issues, a series of 28 leaflets on issues for wide public distribution, and a regional Land Grant University Report of a 15-state survey of farmer preferences for ag policy.

In the meantime, the administration signaled through its *Blue Book* its general preferences for food and agricultural programs. Specific partial or comprehensive proposals began to flow from Congress as the debate grew on budget reconciliation and deficit reduction bills. Some of the proposals include:

- to cut target prices and budget outlays and move toward the eventual phasing out of commodity programs (Senator Lugar, Rep.)
- to retain most present farm programs but reduce the budget with more "flex" unpaid acres and greater planting flexibility (Senator Cochran, Rep.)
- to replace present programs with continued price supports through marketing loans for producers up to a maximum production but to reduce the budget through less support for excess production and large



farms (Senator Daschle, Dem., and others)

- to replace the present program and reduce the budget through declining fixed payments over seven years, with no conditions set for production (Representative Roberts, Rep.)

- to retain most present farm programs but allow more planting flexibility and reduce the budget by excluding payments to farmland owners with over \$100,000 of off-farm income (Representatives de la Garza and Stenholm, Dems.)

Driven by the apparent momentum for budget reduction, these proposals would reduce government farm outlays by 5–18 percent from the about \$10 billion in the 1990 program. There is similar budget controversy over the extensive food assistance programs of some \$40 billion for low-income families, children, and the elderly. Some proposals would return programming decisions and administration to the discretion of the states. The Table gives some budgetary perspective.

## The 1995 Process

Congressional hearings on specific issues began in 1994 and carried into 1995 at numerous locations around the country. Throughout the summer and early fall, the attention of policymakers mainly focused on budget deficit reduction, first for FY1996 and then for the next seven to ten years. Controversy continues over both the extent of budget reductions and the content of farm commodity, food assistance, conservation, and export programs.

Although both the House and Senate leadership set a late September deadline for resolution of differences over the budget for the new October 1

fiscal year and the new 1995 policy for agriculture and food, lack of consensus has delayed both issues and, as of this writing (December 1), only a FY1996 budget for the USDA had been approved. With the passage of the Republican-backed seven-year Congressional budget reconciliation bill and its veto by President Clinton, the new agricultural and food policy has been postponed longer than in any recent period. However, delays are hardly unique. In past years they have extended for months. The 1990 Act was not finally signed by the president until November 28, 1990, while the 1985 Act came even later. It is conceivable that the parties will be unable to find a compromise and will only be able to agree on a year-to-year extension of the 1990 Act, with changes mandating budgets through the appropriations process. Whatever the outcome, it will likely involve lower outlays for both producers and low-income consumers as well as less public surveillance

over both production and food quality.

## Conclusion

Decisions about important public issues are always made eventually, and some agricultural and food policy will be enacted. Prime public issues continue to be the efficiency and security of the food and fiber supply, the safety of the delivery system to consumers, and the eventual welfare—including but not limited to economic values—of producers and consumers. Policy-makers will be frustratingly deliberative about the programs as well as their budgetary impact because the consequences of their eventual decisions will affect every citizen as producer, consumer, or taxpayer for years to come. Only when the final compromise is struck at some yet unknown date will we know whether the 1995 agricultural policy will be more evolution or revolution.



Photo by University of Illinois Ag Communications



## The 1996 Outlook



Since this is my first venture into the world of economic forecasting after taking over the position of Director of the Commerce Research Office, I would like to begin with a bit of philosophy. Some might call this a way of explaining future failures to forecast accurately.

I would like to discriminate between econometric forecasting and predicting. While this is a slight play on words, the distinction is useful. Econometric forecasting generally involves the development of a system of mathematical equations, the purpose of which is to use historical data to explain the interrelationships and trends among economic variables. These relationships are then used to forecast the future. In a technical sense, the forecaster is constrained by the extent to which past relationships can be identified and also by the extent to which structural conditions that explain the past continue to be important.

Predicting, as I am using the term, is more of an art. It involves

combining information from the econometric model with information not in the model, such as political and social factors that could influence the economy, followed by the application of a good dose of common sense. It is much like looking outside to see whether or not it is raining before forecasting that it will be a great day for a golf outing. Similarly, if the economy has been growing at a snail's pace for a number of quarters, one might want to reconsider a forecast of a very high rate of growth derived from the econometric model.

Thus, it is my purpose to bridge the technical econometric forecasts with reality where it appears the model might be signaling a significant change in the direction or level of some area of the economy. Fortunately, perhaps, for me the forecasts for the US and Illinois economies seem to be both realistic and defensible. We expect neither boom nor bust. The forecasts for the US economy are for continued solid but slow growth, probably slower than in the past two or three years. Likewise, employment will continue to grow at a very slow rate, and inflation should not be a major concern.

The Illinois economy should grow at an even slower pace than the national economy, with the possibility of declines in employment in some sectors in the next two years. The major influence on the Illinois economy seems to be the continuing restructuring of the economy across the nation. Illinois has traditionally been a dominant goods producer, and like many other midwestern states, it has been strongly affected by the decline in manufacturing and expansion in service industries.

Growth in the Illinois economy is highly dependent upon growth in service sectors. The econometric model forecasts continued rapid growth in those components of the service sector that include financial services, business services, health, and legal services. However, there are forces looming that will make it difficult to achieve such rates of growth in the future.

First, the consolidation among firms continues in services, especially in banking and health care. With consolidation comes restructuring of the labor force and the continued lay-off of mid- to high-level officers. In many cases, those being displaced are relatively senior employees whose alternatives are at lower levels of compensation. It is to be hoped that the gains in productivity will offset the negative effects of this transition.

Second, the February 14, 1995 edition of the *New York Times* noted that a widely followed survey of 2,097 employers by Foster Higgins, a benefits consulting firm, reported that the employers had witnessed a decline in medical costs of 1.1 percent. Medical costs in the private and public sector are being brought under control, something that seemed impossible just a few years ago. Therefore, the health care sector cannot be relied upon to generate the levels of growth in employment and spending experienced in the late 1980s and early 1990s.

Third, there are two additional and disturbing economic trends reported in this issue. Consumer debt as a percent of disposable income is at a record high level, and growth in personal disposable income at a very low level. Clearly, consumer debt

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*The transfer of responsibility for problems now covered by federal government entitlement programs to states through block grants will have profound, if somewhat unpredictable, effects on the state economy.*

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cannot continue to increase at past levels without significant increases in earnings. This was borne out by the disappointing sales reported by retail firms for Christmas 1995.

Finally, let me comment on a few factors that could be considered "gotchas" to forecasters and arm-chair predictors alike. First, the entire world is focused on whether or not Congress and the president can agree on a balanced budget. If an agreement is not reached, we can expect world confidence in the US economy to decline. If an agreement is reached, concern will turn to analysis of its impact on various elements of the economy. Assuming that the agreement results in a *reduction in the rate of increase* in federal government spending, there will be widespread effects on various sectors of the economy—not to mention the need for the private sector to expand adequately to make up for the decline.

A related "gotcha" is one mentioned by J. Fred Giertz in this issue. The transfer of responsibility for problems now covered by federal government entitlement programs to states through block grants will have profound, if somewhat unpredictable, effects on the state economy. Most current forecasts and predictions expect a decline in federal support for these programs with increasing burdens on the states. Be prepared for surprises as there are many complicated (good, bad, and indifferent) unknowns as the proposed programs come to fruition.

The US entry into Bosnia is another event that could affect the economy in the next year. Should the involvement deepen beyond what is currently contemplated, increased costs could create inflationary pressures.

Let us not forget that next year is a major election year. One might predict that campaign spending would be enough to provide a substantial boost to the economy! However, campaigns seem to be unending. Therefore, one year may not be that different from another. It is unclear that elections have much predictable impact on the economy, but they generate substantial discussion.

All this said, barring significant unforeseen events, we seem to be looking toward a year or two of slow but positive growth in the US and Illinois economies. As an economy, we will be better off two years from now. However, due to the continued restructuring from goods to services, and even within the service industries, there will be both winners and losers.

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# ILLINOIS BUSINESS

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*Why Some Communities Can't Keep Up*



*Who Loses When Casinos Win?*

*Hedging and Interest Rate Swaps Can Reduce Risk*

*Growth in the Illinois Economy*

*Illinois State Revenue Update*

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Bureau of Economic and Business Research  
College of Commerce and Business Administration  
University of Illinois at Urbana-Champaign

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## From the Editor

I am very pleased to have been appointed Director of the Commerce Research Office at the University of Illinois at Urbana-Champaign and editor of the *Illinois Business Review*.

The *Illinois Business Review* has been around over 50 years. Over such a period, the mission and focus of a publication have to change occasionally. As you can see, we are again making changes.

Currently, we consider the mission of the *Illinois Business Review* to include bringing our readers the following:

- ◆ critical analyses of changes and developments in major industries in Illinois, such as the article by Carole Amidon on structural changes in employment and earnings from manufacturing to service industries,
- ◆ critical analyses of how issues (such as gambling) affect Illinois and various communities in the state,
- ◆ topics about management and leadership,
- ◆ articles that bring to the business community research findings of faculty members at the University of Illinois College of Commerce and Business Administration,
- ◆ economic forecasts of the Illinois economy with emphasis on different sectors of the economy and different regions within the state,



Richard J. Arnould

◆ news items about research activities of the faculty and programs and symposia conducted by the College.

The economic forecasts will be provided as a joint effort between economists at the Commerce Research Office and the Institute of Government and Public Affairs. We are happy to have Professor Robert Resek again involved in our forecasts. Professor Resek began the Illinois state economic and revenue forecasts when he held the directorship and was editor of the *Illinois Business Review*. He rejoins us after retiring as Vice President for Academic Affairs of the University of Illinois.

The changes we are making are intended to achieve two very important goals. First, we hope to make the presentation more appealing and reader-friendly. Second, we hope to bring to you topics of interest and provide you with information of value.

We cannot succeed in our mission or know how to alter that mission without your input. Therefore, we have included in this issue a short reader survey along with a return envelope. Would you please take a few minutes to respond to the questionnaire? We value your opinions.

Thank you.

Richard J. Arnould

## Commerce News

### UIUC Professors Find Academics Not Always the Reason Student Athletes Leave School

The common assumption that most athletes who drop out are forced to do so by failing grades may not be true.

UI economics professors Wallace Hendricks, Larry DeBrock, and Roger Koenker have found that the graduation rates of college athletes may not reflect their academic abilities or the academic support provided by their schools. Graduation rates for nonathletes also vary dramatically across campuses. Students drop out for a variety of reasons. More than 85 percent of athletes drop out voluntarily, and

fewer than 15 percent leave because of academic troubles.

All drop outs make an economic choice about the value of their degree. An athlete is more likely to drop out of a school whose degree confers little value in the labor market. Male football and basketball players have the added incentive to leave school to accept lucrative contracts with professional teams. Female basketball players have few such opportunities and graduate at a significantly higher rate. **IBR**

# ILLINOIS BUSINESS Review

Bureau of Economic and Business Research  
College of Commerce and Business Administration  
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Spring 1996 ♦ Volume 53 ♦ Number 1

## Why Some Communities' Earnings Can't Keep Up

The distribution of manufacturing versus service jobs may explain differences in area earnings.

By Carole M. Amidon ..... Page 4

## Who Loses When Casinos Win?

Although riverboat casinos are highly profitable businesses, their impact on area economic development has not been great in Illinois.

By E. L. Grinols and J. D. Omerov ..... Page 7

## Hedging and Interest Rate Swaps Can Reduce Risk

Judicious use of hedging and interest rate swaps can and do help today's businesses and financial institutions avoid losses due to fluctuations in interest or currency valuations.

By Stanley B. Block, Timothy J. Gallagher, and Sibnath Mitra ..... Page 12

## Modest Growth Expected in Illinois

Services are expected to lead the Illinois economy to steady growth through 1998.

By Harvey B. Westbrook, Jr. .... Page 15

## Illinois State Revenue Update

A \$562 million increase in state revenues is predicted for FY 1997.

By J. Fred Giertz and Robert W. Resek ..... Page 18

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The mix of service versus manufacturing jobs can affect a community's per capita earnings.

Photo: Mitsubishi Motor Manufacturing.

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# Why Some Communities' Earnings Can't Keep Up

By Carole M. Amidon

**A higher percentage of manufacturing jobs may account for why some communities have higher per capita earnings than others.**

Over the last five years, Illinois workers have brought home a higher average wage and a larger percentage of earnings from manufacturing than the average U.S. worker. In Illinois as in the country as a whole, a greater percentage of earnings is now due to services and less to manufacturing, but Illinois still derives a larger percentage of its earnings from manufacturing than the U.S. as a whole (Chart 1). This may explain why per capita income in Illinois has been consistently higher than the rest of the United States. One reason that manufacturing wages are higher than service wages is the effect of productivity. When workers can produce more revenue for their company, their wages can be higher. However, productivity in service industries increases at a slower rate than in manufacturing because these enterprises can increase productivity by replacing workers with machines. On the other hand, it is difficult to increase the number of operations that a surgeon performs or the speed of a piano concerto.

## Wage Differences in Illinois

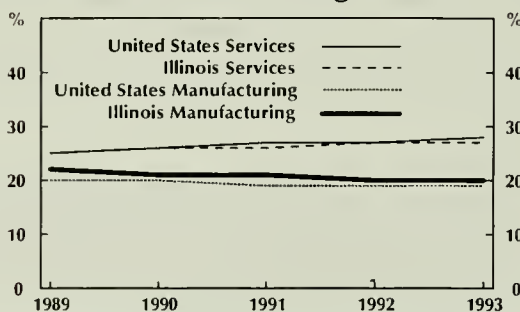
Some Illinois communities derive relatively more of their employment from manufacturing than others (Chart 2), and in these communities earnings have grown faster over the past 25 years. In the ranking, Springfield has the lowest percentage and Rockford the highest. If you look at growth in earnings for 1992–1993, 1989–1993, and

1983–1993 Champaign-Urbana had 0 percent, 18 percent, and 71 percent, respectively, in the periods examined, while Chicago had growth of 4 percent, 22 percent, and 88 percent for the respective periods. Thus, the Champaign-Urbana area has consistently lagged behind the Chicago area in earnings growth.

Chart 3 shows the average per capita wages in eight Illinois metropolitan statistical areas (the wage per job in an area

rather than the wage per person). The ranking of the statistical areas by the average wage has not changed much over the past 25 years, but the gaps between areas have become more pronounced, especially after the 1980s.

**Chart 1. Manufacturing and Services as a Percent of Total Earnings**



Percentage earnings from manufacturing have been higher in Illinois than in the U.S.



Carole M. Amidon

Carole M. Amidon is a graduate student in the Department of Economics and a research assistant in the Commerce Research Office at the University of Illinois at Urbana-Champaign.

Taking a closer look at Chart 3, the Champaign-Urbana area has the second lowest percentage of earnings derived from manufacturing after Springfield (Springfield is expected to have a lower percentage of earnings related to manufacturing due to the large government and related services sector). Champaign-Urbana also has the second highest percentage of earnings from service industries. Much of the lower average wages in Champaign-Urbana can be explained by this higher concentration of low-wage service jobs. The higher dependence on service industries, leading to lower growth in wages, partially explains the increasing gap between average per capita wages in Champaign-Urbana and the other metropolitan statistical areas over the past 25 years. The remainder of the metropolitan areas also follow the trend of widening differences in average per capita wage due to differing concentrations of manufacturing earnings, though to a lesser degree.

The two exceptions to this theory are Rockford and Springfield. Although Springfield would be expected to have the lowest average wage in the state because of its high concentration of service industries, instead, it ranks in the middle of the distribution. A possible explanation is that the service jobs in Springfield are higher-paying ones, such as in the legal profession and government support services, and this increases the average wage. By contrast, Rockford would be expected to have the highest average wage because it has the most income derived from manufacturing enterprises. However, while earnings from manufacturing are a higher percentage of total earnings, the actual manufacturing employment dropped by 15 percent from 1989 to 1993. Thus, the manufacturing earnings are being concentrated in the hands of fewer workers, consistent with the productivity gains experienced in manufacturing enterprises.

Lower-wage areas in Illinois have lower per capita earnings for manufacturing as well as for services (Chart 4). Therefore, it is not the case that the average per capita wage figures are hiding high-wage manufacturing jobs in low-wage areas, but both manufacturing and nonmanufacturing enterprises are paying lower wages in these areas.

Manufacturing wages are growing, but firms are employing fewer workers. From 1989 to 1993, the manufacturing earnings as a percent of total earnings either remained fairly steady or increased in the metropolitan statistical areas, except for Rockford where it fell from 46 to 39 percent (Chart 3), although the average per capita earnings from manufacturing have risen over the same period (Chart 4). Only the Champaign-Urbana, Kankakee, and Springfield statistical areas have gained manufacturing employment from 1989 through 1993, while

the rest lost manufacturing employment. Thus, while manufacturing earnings as a percentage of total earnings has held steady, in most statistical areas the increased average per capita manufacturing earnings are being accrued by fewer people.

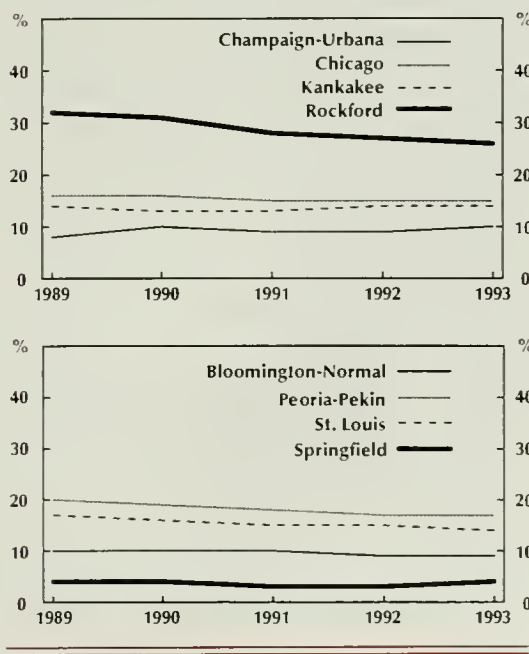
## ***Lower-wage areas have lower earnings for manufacturing as well as for services.***

### **Can It Be Good to Be Low Wage?**

Lower average wages can be good for a community. It may be easier for the Champaign-Urbana area to attract new businesses, both manufacturing and otherwise, than Bloomington-Normal, where the average wage is higher. Not only could a prospective new business expect to pay lower wages in Champaign-Urbana now, but the slower growth in wages implies that the wages will remain comparatively lower. Firms that locate or relocate to low-wage areas can, thus, expect a competitive advantage in wages now and in the future.

From the worker's point of view, the attraction of higher wages in otherwise similar areas of Illinois may entice potential employees to move from low-wage communities to high-wage areas, creating a shortage of workers in the low-wage places. Then, as

**Chart 2. Manufacturing Employment as a Percent of Total Employment**



Rockford has the highest percent of its employment from manufacturing and Springfield the least.



Photo: Mitsubishi Motor Manufacturing

Manufacturing enterprises such as Mitsubishi help give Bloomington-Normal a higher per capita income than some neighboring communities.

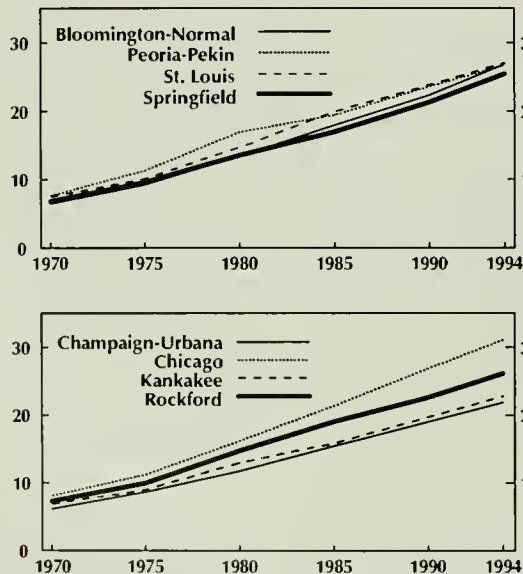
firms compete for fewer workers, wages could be driven upward and eventually catch up. Currently, there are no data to show whether workers are actually moving to higher wage areas because of the wage differences, but the increasing gap between the high-wage and low-wage areas suggest that little migration is actually occurring. Thus, firms need not worry yet that the workforce is going to desert wholesale and take away the competitive edge provided by low-wage workers.

Overall, Illinois has followed the well-documented trend in the United States toward fewer earnings deriving from manufacturing and more from service industries. At the same time, earnings from manufacturing are still a larger percentage of earnings in Illinois than for the United States as a whole, and the percentage of service earnings is

## Lower average wages can be good for a community.

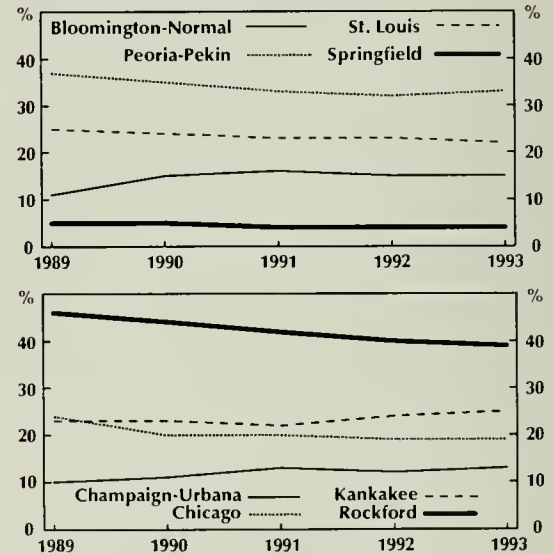
smaller. The metropolitan statistical areas are following the national and state income trends. Not only have they maintained their average per capita wage rankings over the 25 years period, but the difference between the highest wage areas and the lowest wage areas has consistently grown. Low wage communities are characterized by higher percentages of earnings derived from services and lower percentages of income from manufacturing. A larger percentage of income from service industries not only decreases the average per capita wage in an area but also decreases the rate of growth of earnings. Even though labor market theory supposes that potential workers will move from low-wage areas to high-wage areas, the data do not seem to show that this is happening in Illinois—since the difference in average per capita wages has increased, not decreased. Low-wage areas, such as Champaign-Urbana, may be at a disadvantage for attracting new workers to the area but may have a competitive advantage when enterprises are considering start-up, expansion, or relocation. **IBR**

Chart 3. Per Job Wage (\$ thousands)



The ranking of areas in per capita wage hasn't changed much over the past 25 years, but the gaps have increased.

Chart 4. Manufacturing Earnings as a Percent of Total Earnings



Lower-wage areas of Illinois also have lower wages for manufacturing jobs.



# Who Loses When Casinos Win?

By E. L. Grinols and J. D. Omorov

## Although riverboat casinos are highly profitable businesses, their impact on area economic development has not been great in Illinois.

Casino gambling remains controversial in Illinois and other states that have introduced it or are considering it. This is mainly because the associated increase in problem and pathological gamblers creates social costs of between \$110 and \$340 per adult per year when averaged over the entire population. In other words, using a figure midway in the range, for a representative group of 100 adults to have gambling would require the group to pay \$22,500 annually. Were these social costs absent, few would object to casino gambling or care how much there was. Other objections to gambling relate to the need for constant government oversight and regulation, questionable political influence-buying by the gambling industry, and the fact that gambling involves directly unproductive activity that reduces national income. On the benefit side of the ledger is the fact that for many adults who can gamble without problems, it is an additional form of recreation.

### Why Who Loses Matters

Although social costs are the main economic objection to casino gambling, the source of casino revenues matters to understanding gambling and to making decisions about it. For example, the evidence suggests that a large portion of the revenues of expanded casino gambling will come from problem and pathological gamblers. From surveys of states with casinos, we find that a number in the range of 3 or 4 percent of the population eventually will be active problem or pathological gamblers. For example, a

July 1995 Iowa study found the rate there to be 3.3 percent. Problem and pathological gamblers report losing \$3,600 annually to gambling, half of which can be ascribed to casinos (in Illinois more than half of the combined revenues from horse racing, the lottery, and casinos is from casinos). According to gambling industry data, an average 100 adults living within 35 miles of Atlantic City and Las Vegas lost, as a group, a total of \$14,200 annually to casinos in recent years. Assuming that these numbers are representative and allowing for some variation, from three-eighths to one-half of casino revenues will come from problem and pathological gamblers.

Such gamblers frequently exhaust their family's savings, run up credit card debts, embezzle, and in other ways acquire money for gambling from nonsustainable sources. Such "mining" of the savings and credit card balances of a portion of the population has long-term consequences for the economy that we do not go into here. Losses to the casinos by problem and pathological gamblers from these sources do not necessarily require the gambler to reduce expenditures on items of daily consumption. Other casino revenues, however, come from reduced revenues to other businesses. Whether these other businesses are geographically near or far away from the casino determines the effect that the casino has on the nearby economy.

Three analogies help to conceptualize how casinos function. First, a casino can act as a factory by exporting its products to buyers outside the immediate area and bringing in new money that is spent locally in the form of payroll, the purchase of inputs, and local



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Photo: The Champaign-Urbana News Gazette.

Illinois casinos do not seem to have brought economic boom to their communities.

collecting money from both local residents and persons outside the region. The activity of the toll house has no positive effect on the local economy because the money collected leaves the area. In effect, the casino is just a collection booth operating to benefit owners from outside the area. The local economy may even be damaged by the toll house to the extent that gambling takes more out of the local economy than it brings in.

Government officials often confuse casino profitability with economic development. In each of the three cases described, casinos may be hugely profitable, yet only the first results in economic development in the sense of moving jobs to the area.

In Illinois, as in other states where a casino license gives the holder exclusive rights to market gambling as a regional monopoly, casinos frequently earn much higher than normal profits on their investment. The bulk of their revenues, 80 percent, 90 percent and more in some cases, come from residents. Illinois casino companies have also been active over the years in promoting casino ventures in other states. Money earned in Illinois to finance gambling in other states represents a drain on the economy, showing up in reduced revenues to existing businesses.

## What We Expect

If a small enough neighborhood of the casino is considered, the introduction of any casino or other business firm will lead to an increase in jobs in the neighborhood. If the area considered is expanded, however, we expect to see the revenues and jobs of some sectors harmed (those for whom gamblers reduce their expenditures when their gambling losses grow) and the revenues and jobs of complementary

spending of the owners' profits.

Second, a casino can act like a restaurant, selling its services to local residents and existing tourists. Since no new dollars are attracted from outside the area, the effect is to redistribute money in the local economy. This restructuring or cannibalization of the market benefits casino owners at the expense of preexisting firms.

Third, casinos can act as toll houses, col-

lecting money from both local residents and persons outside the region. The activity of the toll house has no positive effect on the local economy because the money collected leaves the area. In effect, the casino is just a collection booth operating to benefit owners from outside the area. The local economy may even be damaged by the toll house to the extent that gambling takes more out of the local economy than it brings in.

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## What We Found

It is a matter for study to determine what type of expenditures casinos affect, how far away these effects can be identified, and the extent to which the effects are similar in different casino locations. These questions matter ultimately because we would like to know if casinos lead to employment gains. As explained earlier, this last question is equivalent to asking whether casinos act as true tourist attractions (factories) or, instead, serve only as convenience gambling centers for nearby residents (restaurants and toll houses).

## Sectors Affected

To see which sectors are most affected by the opening of a casino, we obtained Kind-of-Business Tax receipts data collected by the State of Illinois. These data divide sales tax collections into 10 categories of expenditure: general merchandise; food; drinking and eating; apparel; furniture, household, and radio; lumber, building, and hardware; automotive and filling stations; miscellaneous retail and wholesale; other miscellaneous; and manufacturers. By knowing the tax rate, we can calculate total market expenditures in each category. We collected 21 quarters of data, much of it by laborious hand transcription, going back to the beginning of 1989. We separated collections into taxes reported by establishments situated within 0–5 miles of the casino and 5 to 10 miles of the casino. In some areas, data were collected for distances 10 to 30 miles away. Quarterly tax collections, state tax collections for the same category of expenditure, and casino revenues were adjusted for price level changes. The sample of casino locations included Alton, Aurora, Galena, Joliet, Metropolis, Peoria, and Rock Island.

In Chart 1 we see the average effect of an additional \$1,000 of casino revenue on the sales of the ten categories of merchandise. (The contribution to



the average by different locations is shown by the keyed bar segments. Segments to the right of zero show gains and segments to the left losses.)<sup>1</sup>

Three spending categories show large effects. General merchandise, and miscellaneous retail and wholesale trade stand out as the two showing the greatest losses. Miscellaneous retail and wholesale revenues, showing an average loss of \$247, are also notable in that all seven locations reported losses. General merchandise, showing a larger drop among four locations, had three locations reporting positive effects. However, only the smallest (Galena) was statistically significant, and it was smaller than the statistically significant negative effect reported by Alton. Net losses for the two sectors were \$367.

Losses in general merchandise and miscellaneous retail and wholesale expenditures suggest that casino revenues tend to come from a broad range of alternative expenditures rather than from one particular type of spending. This differs from the situation for the only sector showing gains in all communities.

Automotive and filling station sales showed an average gain of \$295. Most of this effect is due to the two largest cases of Peoria (\$104) and Joliet (\$137), suggesting that casinos enhance the sales of nearby gas stations in these locations. The impact for Peoria for this category of spending within 0–5 miles of the casino was statistically significant, and for Joliet it was nearly so. The other locations reported smaller, statistically insignificant effects, but all were positive.

There does not seem to be an obvious pattern in the remaining seven sectors. In the furniture, household, and radio category there was one positive and one negative statistically significant area, but the effects were relatively small, and the other areas were statistically insignificant. More study will probably be needed before anything further can be said about these other seven sectors.

## The Distance Effect

Chart 2 shows the losses in general merchandise and miscellaneous retail and wholesale trade in more detail by separating them by distance from the casino. The effect of an additional \$1,000 in casino revenue is to reduce sales in these categories by \$142 within 0–5 miles of the casino, and an additional \$217 for businesses 5–10 miles away. The chart also shows the effect on these categories for distances 10–30 miles away based on a sample of Alton, Galena, Metropolis, Peoria, and Rock Island. The effect is small enough to be viewed as negligible. In all, the average loss for an additional \$1,000 of casino revenue was \$381 in these categories.

Chart 3 shows average gains and losses across all goods by distance from the casino. Distances further from the casino generally show losses, while areas

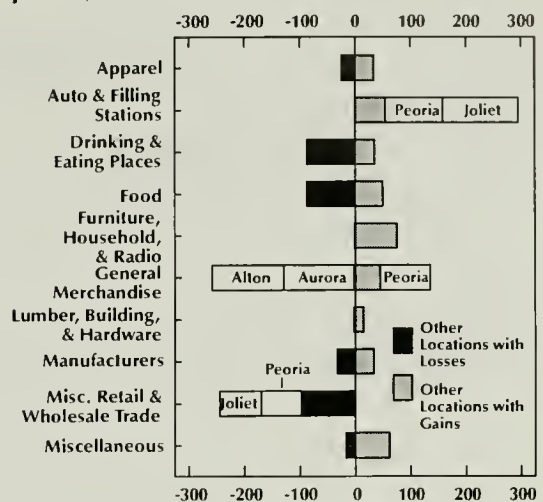
closer are mixed. The average lost revenue was \$195 for all sales between 5 and 10 miles of the casino. Gains occurring for sales within 0–5 miles of the casino averaged \$170 dollars. Peoria accounts for \$145 of the \$170 average. Of Peoria's \$145, \$112 is due to increased automotive and filling station sales. The average loss for all goods 0–10 miles from the casino is \$25.

A cautious conclusion would be that sales in general near the casino tend to rise (or are mixed) at the expense of sales 5–10 miles away. It is possible in areas where eating and drinking at the casino form a part of the increase in revenues near the casino, that eating and drinking establishments nearby suffer since our data do not distinguish between casino and noncasino sales.

Chart 4 shows the contribution in each of five areas to the average long-run effect of the casino on revenues for businesses between 10 and 30 miles away. As expected, the measurable effects are relatively small compared with closer distances, except for Peoria. For each location, there are two estimates. One derives from the sum of effects from individual sectors, as described earlier.

The two procedures yield comparable figures with the notable exception of Peoria. Further investigation reveals that the large summed figure for Peoria is more than two-thirds explained by a single, statistically insignificant, large estimate for food sales (not eating and drinking establishments) 10–30 miles from the casino. This suggests the need for further investigation to rule out possible spurious correlation.

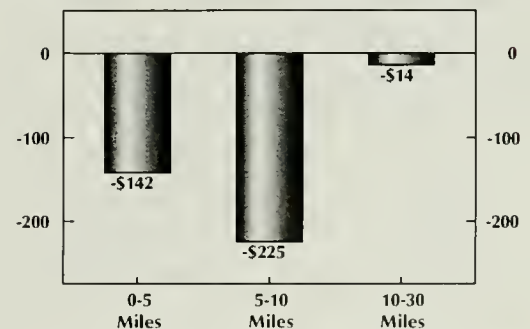
**Chart 1. Sectoral Winners and Losers Zero to Ten Miles from Casino (Sales Change per \$1,000 in Casino Revenues)**



Casinos are, in general, associated with losses in miscellaneous retail and wholesale expenditures and with reductions in general merchandise sales within 10 miles of the casino.

Note: The individual segments represent each city's share of the gain or loss resulting from a total \$1,000 increase in revenues averaged across all casino locations.

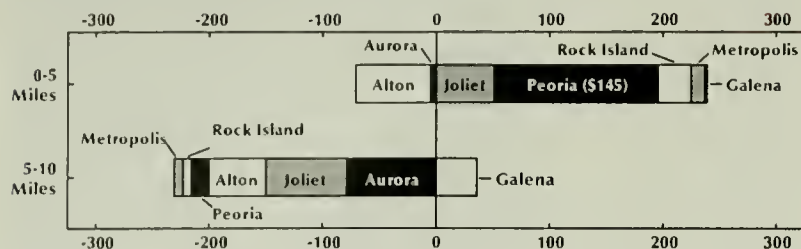
**Chart 2. Average Losses by Distance from Casino for General Merchandise and Miscellaneous Retail and Wholesale Trade**



The losses in miscellaneous retail and wholesale expenditures and general merchandise sales per \$1,000 increase in casino revenues are larger 5–10 miles from the casino than for 0–5 miles away.



**Chart 3. Revenue Gains and Losses of All Goods per \$1,000 Increase in Casino Revenues by Distance from Casino**



Expenditure losses 5-10 miles from the casino of \$195 exceed gains 0-5 miles away by \$25.

Note: The individual segments represent each city's share of the gain or loss resulting from a total \$1,000 increase in revenues averaged across all casino locations.

We estimate that average revenue losses 10-30 miles from the casino are \$243 per \$1,000 increase in gross casino revenue. The average loss is reduced to only \$61, however, if Peoria is omitted from the sample, and becomes a gain of \$249 if Peoria is included, and we use the sum of estimates of the individual sectors.<sup>2</sup>

## Employment

If we ignore the direct social costs associated with casino gambling, the particular source of casino revenues only matters for local policy because it determines whether casinos shift employment to the region. For the nation as a whole, shifting employment from one location to another does not affect the total employment. We plotted (Chart 5) the number of people employed each month in counties containing casinos relative to total state employment for January 1987 to July 1994, a period spanning the introduction of casinos. In some cases data from more than one county had to be used to cover the area surrounding the casino. We scaled state employment to the size of the local labor market the month before casino opening and subtracted from county figures. In Chart 5 the zero line represents employment that varies at the same rate as state employment, while movement above or below zero means that area employment growth was faster or slower than the state.

**Chart 4. Revenue Gains and Losses 10-30 Miles from Casino of All Goods per \$1,000 Increase in Casino Revenues**



The estimated effects 10-30 miles from the casino are generally smaller than those 0-10 miles away.

frequently cited by the gambling industry as examples of economic development. We plotted both the actual employment and the employment change that would be expected if casino gross revenues came from gamblers outside the area and, except for the 15 percent of gross revenues mandated for state taxes, all revenues were spent locally. These are shown in the charts as a broken line starting at the month of casino opening. For both locations there is no noticeable effect of the opening. This was confirmed by statistical estimation procedures. If anything, both areas had growing employment relative to the state that seems to have leveled out when the casinos were opened (Joliet) or eighteen months before (Aurora). Because both Joliet and Aurora were growing before and after casino introduction, it is important to distinguish the effect of the casino from growth that would have taken place anyway. The great size of the potential employment increase from the casinos in Joliet reflects the presence of the large Chicago market nearby from which the casino draws its revenues and which gives the casino its tremendous profitability.

The story is similar for Peoria, and for Alton, Rock Island, and East St. Louis (St. Clair County), which are not charted. Peoria employment was growing relative to the state before the introduction of its casino in November 1991 (Chart 5), while Rock Island and East St. Louis employment were declining. In the case of Peoria, growth relative to the state appears to have stopped at about the same time the riverboat was introduced while the growth in Rock Island and East St. Louis appear to have abated before the casino. In none of the four cases was there an obvious positive impact on employment by the casinos starting with the month of opening. This is consistent with the observation that a large majority of the gamblers in Peoria were from Illinois and for Rock Island with the fact that Iowa had competing riverboat casinos.

In contrast with the other areas, Galena (Jo Davies County) and Metropolis (Massac County, not charted) appear to show a positive impact of the casinos on employment. Both counties have employed populations too small to support a casino, with total county employment of 10,194 and 6,249, respectively, in the year before casino introduction; and they have a larger nearby population base to draw from outside the county. Employment is noticeably higher after the introduction of the casinos than before, though the effect in each case is a fraction of the potential impact that would be expected were all money taken from gamblers from outside the area and all the money earned retained in the county. The data are consistent with what one would expect if substantial casino profits and

nonpayroll expenditures were removed from the area in question. Large inflows matched by nearly as large outflows means that the casino will have a smaller impact on the economy.

The effect in Galena is several times larger than that in Metropolis. According to statistical estimates, an additional \$100,000 of casino revenue is associated with 4.7 and 1.3 additional jobs in Jo Davies and Massac counties, respectively. This is 41.2 and 15.2 percent of the long-run potential impact in each market.<sup>3</sup>

The lack of impact on employment in most markets and the small effect in Metropolis can be explained by the analogies to restaurants and toll houses already discussed. In the case of Joliet, for example, 39 percent of the employees reside outside the city, and one-third live outside the county—hence their spending is lost to the local economy. A study of Wisconsin found that over half of casino patrons lived within 50 miles, and 73 percent within 100 miles (William Thompson, Ricardo Gazel, and Dan Rickman, "The Economic Impact of Native American Gaming in Wisconsin," *Wisconsin Policy Research Report*, Vol. 8, No. 3 (1995), p. 21) This is consistent with the pattern that expenditures close to the casino rise at the expense of those further away. In Minnesota, 93.2 percent of gamblers in a recent year were from in-state (Robert Whereatt, *The Minneapolis Tribune*, March 7, 1993). In the case of Wisconsin, 79.8 percent of gamblers came from in-state, and 15.1 percent came from the nearby states of Minnesota, Illinois, Iowa, and Michigan.<sup>4</sup> Since each of these states have casinos, the revenues from out-of-state gamblers would have to be balanced against one another to determine the true size of net flows.

## Conclusions

Economists have long known that casinos should not be viewed as tools for economic development except in special situations such as Las Vegas where they have become national and international tourist attractions, often offering major entertainment and amusement components geared toward marketing convention and other services to those outside the area. In contrast, local convenience casinos primarily serve nearby residents, operating more like restaurants or toll houses in their effect on local employment and the economy.

Even when casinos do not expand the local economy, they, nevertheless, take in large sums of money. We have found that casinos are associated with a drop in general merchandise and miscellaneous retail and wholesale trade within 10 miles of the casino averaging \$367 per \$1,000 increase in

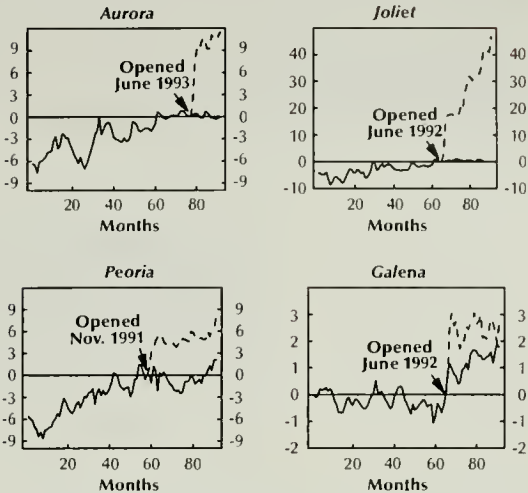
casino revenues and that automotive and filling station sales were increased significantly in some areas. The average was \$295. The effects on other kinds of business receipts are unclear, being smaller and both positive and negative. Total expenditures within 10 miles of the casino drop \$25. Combined sales 5–10 miles away were uniformly harmed by casinos (with the exception of Galena) indicating that gains 0–5 miles away come at the expense of sales further away. More data is needed to resolve the uncertain results for sales

10–30 miles from casinos, although theory would lead us to expect harmful effects, but smaller ones.

Considering the evidence presented here, regional economic development does not appear to be an important reason to turn to casino gambling in general, even though the study shows that the theoretically possible contribution under ideal conditions could be large. Of the eight areas examined to see the effects of casinos on employment, six showed no relationship between the introduction of casinos and increased employment, one showed an employment increase equal to 15 percent of possible, and another 40 percent. This suggests that the majority of the revenues earned by casinos came from nearby residents, much of the casino revenues were removed from the county by casino owners, or some combination of both.

The lack of net job gain in most of the counties with casinos must be attributed to taking jobs from elsewhere in the county or the failure to create jobs that would have occurred in the absence of casinos. This conclusion should not be viewed as unusual, since casinos operate under the same laws of economics as other businesses. For the same reasons, we would not be surprised to find that the opening of a large Walmart failed to increase total jobs. Employment gains are possible, but this should not be presumed, as it has usually been represented by the gambling industry. Studies such as ours merely confirm the more reasonable expectation that there should be little or no economic development in the usual case except possibly in the area close to the casino itself. **IBR**

**Chart 5. Employment Relative to State (thousands)**



**Although the potential impact of casinos is large, in most cases the actual effect is almost nil.**

*Footnotes on page 19.*



# Hedging and Interest Rate Swaps Can Reduce Risk

By Stanley B. Block, Timothy J. Gallagher, and Sibnath Mitra

## Hedging and interest rate swaps can help today's businesses and financial institutions avoid losses due to fluctuations in interest or currency valuations.

Unusual volatility in financial markets has marked the last decade. The most striking example was the stock market crash of October 19, 1987, in which the Dow Jones Industrial Average declined 22.6 percent in one day. By contrast, the largest one-day loss during the fabled crash of 1929 was slightly over 12 percent. On that dismal day in October 1987, IBM stock dropped 37½ points; Eastman Kodak, 26 points; Westinghouse Electric, 20½ points; and DuPont, 18½ points.

Volatility in financial markets has not been limited to the United States. In Japan, the Nikkei 225 Average is down almost 60 percent since its peak in the early 1990s. In Mexico, securities declined 52 percent from the end of third quarter 1994 as compared with the same period in 1995.

Nor is volatility confined to stocks. In 1994, long-term Treasury bonds provided a scant return of 1.52 percent (based on interest received less decline in value). Only one year earlier the same securities provided a robust total return of 16.93 percent.

There has been similar volatility in the foreign exchange market. The Japanese yen and German deutsch mark increased by double-digit increments against the U.S. dollar in the first half of 1995 and reversing the pattern in the third quarter of the year.

### Coping with Volatility

The stock portfolio manager at times appears to be on a roller coaster on which one quarter or year he

is praised for providing large returns for clients and the next he is held responsible for depleting the capital of an individual investor, pension fund, or university endowment.

Interest rate volatility can also be a problem to the chief financial officer of an industrial corporation: an increase in interest rates may turn an otherwise profitable venture into a losing proposition. Everything can go right on the development of a new product except the cost to finance it. Operating profits are translated into losses because of unanticipated increases in interest rates.

The banker faces the same challenges. A loan that on the surface appears to be profitable may, in fact, generate losses if the cost of funding the loan suddenly goes up. This was the case for many mortgage bankers a decade ago.

The opposite can also happen. When a banker agrees to accept long-term deposits at a fixed rate and interest rates suddenly drop, he/she may well be paying more for funds than the proceeds generate in a declining interest rate environment.

In the case of foreign exchange, a contract to be closed out in yen, marks, or francs in the future may eventually turn out to be unprofitable if the currency in question declines in value against the dollar.

There is, however, virtually no risk in the financial markets that cannot be hedged away. This is an important message to the business executive. Whereas five or ten years ago unexpected changes in interest rates or foreign exchange rates could have a crippling



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effect on financial plans, this is no longer acceptable. The option to hedge is available, and one must decide to accept the risk or remove all or part of it through hedging. This does not mean that hedging is always the right answer or should always be used. It has its disadvantages as well as advantages. What *can* be said is that hedging should always be *considered* where there is risk involved. More and more in the future, boards of directors will be asking their chief executive officers and financial officers whether they have considered their hedging option, and an answer will be expected.

## A Closer Look at Hedging

Specifically, hedging means entering into a transaction that partially or fully reduces a prior exposure to risk. In the case of the chief financial officer of an industrial corporation who saw a profit turn to loss due to increasing interest rates, a hedge may have avoided the loss.

Let us assume that interest rates were 8 percent when the firm borrowed for its new project, but by the end of the period rates had risen to 10 percent. On a \$10 million loan, the 2 percent rise in interest rates means an increase in interest costs of \$200,000 before taxes. Few projects can absorb that kind of shock and remain profitable.

A properly executed hedge could have eliminated the interest rate risk in advance. There are a number of ways to eliminate the risk. Our chief financial officer could have engaged in an interest rate swap. The swap itself has nothing to do with the original 8 percent loan, but has the effect of eliminating the interest rate risk associated with it. This principle is true of most hedging transactions: Although separate from the initial exposure, they have the effect of protecting against its risk.

## How Interest Rate Swaps Work

In an interest rate swap, one party agrees to pay the second a fixed interest rate in exchange for a variable interest rate payment. Our chief financial officer might agree to pay a bank a fixed rate of 8 percent. The rate will not vary over the life of the agreement. The bank, in turn, will agree to pay the firm a rate that starts at 8 percent but will vary with market conditions over the life of the agreement. Let us assume the agreements are based on \$10 million.

If interest rates go up during the term of the agreement, the firm will make money. It is obligated to pay a fixed rate of 8 percent, but the bank will have to pay the going rate because its obligation is variable. For example, if rates go up to 10 percent, the bank will pay the firm 10 percent. What the two parties actually do is net out the difference. The

## *There is virtually no risk in the financial markets that cannot be hedged away.*

bank ends up owing 2 percent (10 percent minus 8 percent) on \$10 million, or \$200,000.

The firm has effectively eliminated its risk of loss due to higher interest rates. The extra \$200,000 it would have had to pay as a result of a 2 percent increase in interest rates on the \$10 million loan was hedged away by the \$200,000 on the interest rate swap agreement.<sup>1</sup>

A hedge does not only take away the risk of losses; it also eliminates the potential for benefits if interest rates go down instead of up. In our example, if interest rates drop by 2 percent, payments on the \$10 million bank loan will be \$200,000 less. That is the good news. The bad news is that on the interest rate swap the firm will lose \$200,000 to the bank. Why? Because the firm is paying the bank a fixed rate of 8 percent on \$10 million and now will receive only 6 percent from the bank whose interest obligation has gone down.<sup>2</sup>

The lower interest of \$200,000 on the bank loan is wiped out by the \$200,000 loss on the interest rate swap contract. While the outcome may not appear to be desirable, it is part of the consequence of hedging. One of the cardinal rules of hedging is that when you eliminate the potential for loss, you do so at the cost of the potential for gain. For many companies that is a fair trade-off.

## The Proper Focus

In our example, the industrial corporation is undertaking a new project that it expects to have a positive impact on its business. Therefore, they do not want to have to worry about making or losing money on interest rate changes.

The vice president of finance will not have to go before the board of directors and explain why he showed a loss because interest rates went up. Likewise, he will not be able to brag that he made a higher profit than initially intended because interest rates went down. Of course, not every CFO would choose to eliminate interest rate exposure. Some may believe they can predict the next movement in interest rates or that the exposure is not large enough to be meaningful. Nevertheless, the interest rate swap market (and other similar markets) provide the opportunity to concentrate on operational performance and eliminate financial exposure.

<sup>1</sup>Interest rates on loans and swap agreements do not always move in perfect tandem; we have assumed that they do in order to simplify the example.

<sup>2</sup>Although not explicitly stated, the bank also had a motivation for the interest rate swap. It may be receiving a variable return on an investment. It fears that interest rates will go down and wants to hedge against that occurrence. With the swap the bank makes money if the rates go down and that covers the other exposure.

# ***There are over five trillion dollars of swaps contracts currently outstanding, a volume that exceeds the national debt***

## **The Swap Market**

The interest rate swaps market began in 1981 when the World Bank issued \$290 million in Eurobonds and swapped the interest and principle on the bonds with IBM for German marks and French francs. Since then, the swaps market has grown faster than any other financial market in history, with the primary participants being financial institutions and industrial firms. There are over five trillion dollars of swaps contracts currently outstanding, a volume that exceeds the national debt of the United States.

The \$10 million interest rate swap contract that we used in our example is termed a plain, vanilla swap. For those being exposed to the swaps market for the first time, it may not have seemed all that plain. However, the active trader in interest rate swaps is used to engage in multi-party swaps with provisions and contingencies that boggle the mind. Such exotic terms as synthetic swaps, roller coasters, reversible swaps, and others are frequently used. This level of sophistication goes beyond the basic intent of this article. However, it is important to

point out that both simple and highly sophisticated swaps are dependent upon the existence of knowledgeable, highly capitalized financial institutions that are able to meet the needs of the participating parties. These so-called swap dealers and facilitators include such well-known institutions as Bankers Trust, Chase Manhattan, Credit Swiss LCS, First Chicago, Goldman Sachs, J.P. Morgan, Morgan Stanley, Solomon Brothers, Société Générale, and Swiss Bank Corp.

Unlike the highly structured options and futures markets (which are also effective vehicles for

hedging), an interest rate swap agreement starts out as a blank sheet of paper in which the participating parties specify all the terms and features that meet their particular needs. Every swap agreement is different in terms of the amount involved, the maturity date, the settlement procedures, and so on. It is through the swap dealers and facilitators that agreements are tailor-made to meet the needs of participating parties throughout the world.

## **How Swaps Are Used in the Real World**

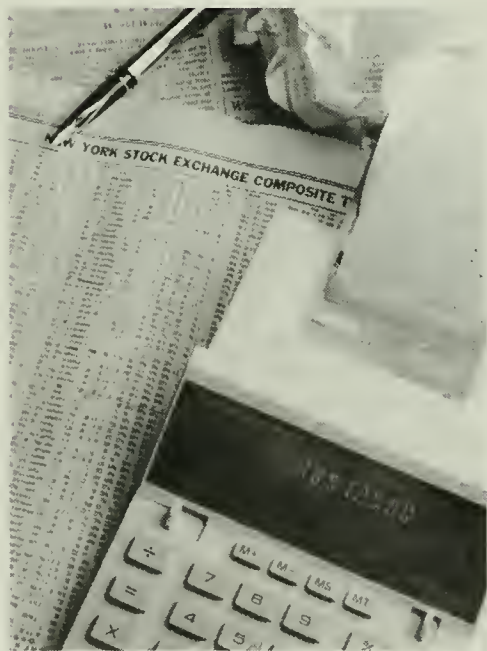
As banks achieved strong profitability and unusually large net interest margins in the last three years, analysts were asking, "How long can this last?" Would the spread between lending rates and borrowing rates remain in the 4.5–5 percent range indefinitely or return to more normal levels? The likelihood is that a more normal profit picture will return, but, in actuality, the large spreads can be locked in for the future, using the interest rate swaps market. Basically, the banks can use hedging techniques similar to the one discussed earlier to offset volatility in interest rates. A lender at fixed rates can hedge through interest rate swaps to lock in the cost of funds and maintain the spread. A lender with variable rates can also use interest rate swaps to establish and hold the initial spread between lending rates and borrowing costs. The question is, are bankers actually doing this?

To answer this question, we conducted a survey of the 300 largest commercial banks in the United States. Of the respondents to the survey, 70.2 percent currently use interest rate swaps, and all but one of the remaining banks indicated that they intend to at least consider implementation of a swaps program in the future. Thus, the use of interest rate swaps is quickly becoming common in the banking industry. The respondents indicated that they prefer swaps over options and futures because of the potential for longer maturity as well as greater flexibility.

What about the remaining 29.8 percent who are not currently participating in the interest rates swap market? The top three reasons given for not participating were lack of expertise, no apparent need, and top management resistance.

When asked what specific type of exposure was hedged, 36.5 percent hedged their commercial loan exposure, 13.5 percent, their real estate loan exposure, and the balance hedged against 25 other possibilities (including, for example, liability pricing, loans and deposits, long-term debt, the asset liability gap). The specific items are not nearly as important as the potential for the wide utilization of interest-rate spreads.

*Article continues on page 19.*



Banks prefer swaps over futures and options for hedging.



# Modest Growth Expected in Illinois

By Harvey B. Westbrook, Jr.

## Services are expected to lead the Illinois economy to steady growth through 1998.

**O**n the whole, the Illinois economy is expected to grow at a modest but steady pace over the next two years. The growth of total nonagricultural employment in Illinois is expected to remain steady at around 1 percent through 1998. Employment in goods-producing industries will increase by less than 1 percent through 1998. The strongest growth in the sector will occur in construction. Construction employment will expand about 4 percent in 1996 and 2.8 percent in 1997. Employment in goods-producing industries is expected to grow at less than 1 percent through 1998. Employment in services-producing industries is expected to increase by 1.2 percent in 1996 and by less than 1 percent in 1997 (see Chart 1, pg. 16). The strongest employment growth in the sector will occur in the services subsector. Services employment will expand at rates in excess of 2 percent through 1998.

Personal income will expand by 2.1 percent in 1996, increasing to 3.5 percent in 1997 and 5.8 percent in 1998. Income in goods-producing industries is expected to grow by 2.4 percent in 1997 and 4.7 percent in 1998. Within the sector, personal income in nondurable manufacturing is expected to increase at relatively robust rates. Income growth in the services-producing industries will be over 3 percent through 1998. As can be seen in Chart 2 (pg. 16), personal income in the service subsector is a fundamental part of the shift in Illinois from a goods-dependent economy towards higher levels of employment and income in services.

Gross state product (GSP) is not expected to expand significantly in 1996; however, statewide GSP will grow in 1997 and 1998. The increase in

Illinois gross state product will be driven, in large part, by robust expansions in services-producing industries (see Chart 3, pg. 16). The services subsector is expected to increase by more than 5 percent over the forecast period.

Retail sales are expected to grow 2.6 percent in 1996. Strong sales of nondurable goods will drive the expansion in total retail sales. The anticipated higher levels of personal income may be expected to encourage increased sales of nondurable goods.

Over time, the Illinois economy has been experiencing a fundamental shift away from a goods-producing economy towards one more dependent on services. The Illinois Econometric Model forecasts a continuation of this trend, with an emphasis on higher levels of employment and personal income in the service industries. Manufacturing will experience a strong increase in personal income; however, employment in the manufacturing industries will lag behind the higher levels in the services subsector of the state economy. **IBR**



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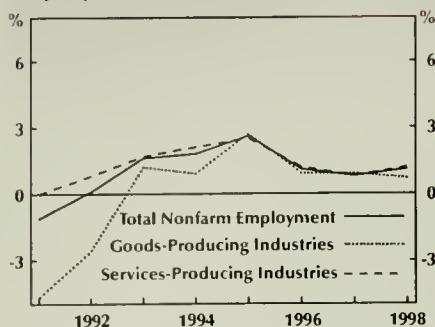
**Harvey B. Westbrook, Jr.**, is a Ph.D. candidate in the Department of Economics and a research assistant in the Commerce Research Office, at the University of Illinois at Urbana-Champaign.

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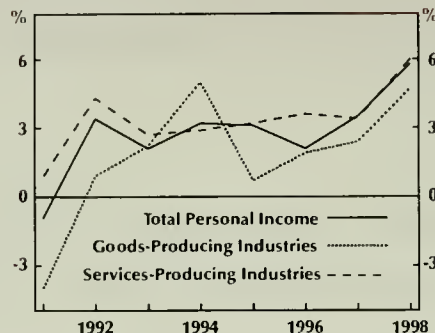
Harvey B. Westbrook, Jr.



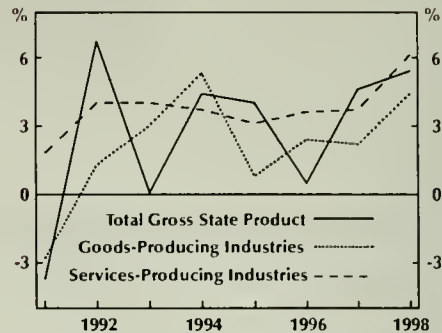
**Chart 1. Growth in Illinois Employment**



**Chart 2. Growth in Illinois Personal Income**



**Chart 3. Growth in Illinois Gross State Product**



After a peak in 1994-1995, Illinois employment growth has slowed but will continue modest increases. Illinois personal income and gross state product are expected to increase steadily through 1998.

## Illinois Forecast Statistics

### EMPLOYMENT (thousands)

	1992	1993	1994	1995	1996	1997	1998
<b>Total Nonfarm Employment</b>	5,226.5	5,308.5	5,405.6	5,543.5	5,606.2	5,650.4	5,712.9
% change	0.1	1.6	1.8	2.6	1.1	0.8	1.1
<b>Goods-Producing Industries</b>	1,125.5	1,139.1	1,149	1,180.2	1,190.8	1,201.7	1,210.3
% change	-2.6	1.2	0.9	2.7	0.9	0.9	0.7
Manufacturing	911.2	925.5	930.3	951.2	956	960.6	964.1
% change	-2.3	1.6	0.5	2.2	0.5	0.5	0.4
Durable Manufacturing	534.7	544.2	548.1	568.5	572.9	575.3	575.6
% change	-3.3	1.8	0.7	3.7	0.8	0.4	0.1
Nondurable Manufacturing	376.5	381.4	382.3	382.7	383.1	385.4	388.5
% change	-0.7	1.3	0.2	0.1	0.1	0.6	0.8
<b>Services-Producing Industries</b>	4,101.0	4,169.4	4,256.6	4,363.2	4,415.4	4,448.7	4,502.6
% change	0.8	1.7	2.1	2.5	1.2	0.8	1.2
Wholesale Trade	345.9	338.4	340.3	349	354.2	354.9	355.2
% change	-2.5	-2.2	0.6	2.6	1.5	0.2	0.1
Retail Trade	889.8	906.1	935.6	952.3	972.4	973.0	982.8
% change	-0.3	1.8	3.3	1.8	2.1	0.1	1.0
Finance, Insurance, & Real Estate	378.5	382.2	387.5	395.4	393.6	393.2	394.0
% change	0.3	1.0	1.4	2.0	-0.4	-0.1	0.3
Services	1,410.0	1,464.8	1,502.4	1,553.7	1,585.6	1,624.5	1,664.1
% change	3.1	3.9	2.6	3.4	2.1	2.5	2.4
Government	773.9	768.1	777.5	790.0	784.0	777.0	778.5
% change	0.4	-0.7	1.2	1.6	-0.8	-0.9	0.2

### REAL RETAIL SALES (millions of 1987 dollars)

	1992	1993	1994	1995	1996	1997	1998
<b>Total Retail Sales</b>	77,036	77,553	79,226	79,875	81,957	84,557	88,934
% change	-1.3	0.7	2.2	0.8	2.6	3.2	5.2
Durable Goods	27,830	29,936	32,023	31,198	31,350	32,822	34,723
% change	5.2	7.6	7.0	-2.6	0.5	4.7	5.8
Nondurable Goods	49,206	47,617	47,203	48,677	50,607	51,735	54,211
% change	-4.6	-3.2	-0.9	3.1	4.0	2.2	4.8

**Services employment will expand at rates in excess of 2% through 1998.**

# Illinois Forecast Statistics

## REAL PERSONAL INCOME (millions of 1987 dollars)

	1992	1993	1994	1995	1996	1997	1998
<b>Total Personal Income</b>	208,766	213,163	220,036	226,850	231,533	239,584	253,460
% change	3.4	2.1	3.2	3.1	2.1	3.5	5.8
<b>Total Nonfarm Personal Income</b>	152,345	156,238	161,654	165,537	170,140	175,527	185,525
% change	3.4	2.6	3.5	2.4	2.8	3.2	5.7
<b>Goods-Producing Industries</b>	39,966	40,825	42,865	43,164	43,969	45,004	47,112
% change	0.9	2.2	5.0	0.7	1.9	2.4	4.7
Manufacturing	31,113	31,863	33,230	33,478	34,203	35,068	36,928
% change	1.9	2.4	4.3	0.7	2.2	2.5	5.3
Durable Manufacturing	17,835	18,396	19,541	19,716	20,163	20,569	21,433
% change	-0.1	3.1	6.2	0.9	2.3	2.0	4.2
Nondurable Manufacturing	13,278	13,466	13,690	13,762	14,040	14,499	15,496
% change	4.7	1.4	1.7	0.5	2.0	3.3	6.9
<b>Service-Producing Industries</b>	111,668	114,671	117,993	121,768	126,170	130,523	138,413
% change	4.3	2.7	2.9	3.2	3.6	3.4	6.0
Wholesale Trade	12,168	11,963	12,204	12,633	13,318	13,969	14,778
% change	1.3	-1.7	2.0	3.5	5.4	4.9	5.8
Retail Trade	13,362	13,675	14,159	14,496	14,979	15,339	16,045
% change	2.0	2.3	3.5	2.4	3.3	2.4	4.6
Finance, Insurance, & Real Estate	13,905	14,277	14,551	14,565	15,088	15,582	16,468
% change	10.3	2.7	1.9	0.1	3.6	3.3	5.7
Services	40,757	42,451	44,095	46,494	48,479	50,403	54,124
% change	5.3	4.2	3.9	5.4	4.3	4.0	7.4
Government	20,228	20,645	20,944	21,268	21,659	221,120	23,163
% change	2.7	2.1	1.4	1.5	1.8	2.1	4.7

***Anticipated higher levels of personal income may be expected to encourage increased sales of nondurable goods.***

## REAL GROSS STATE PRODUCT (in millions of 1987 dollars)

	1992	1993	1994	1995	1996	1997	1998
<b>Total Gross State Product</b>	228,111	243,675	254,395	264,522	265,866	278,057	293,027
% change	-3.7	0.1	4.4	4.0	0.5	4.6	5.4
<b>Goods-Producing Industries</b>	56,936	59,448	62,574	63,094	64,596	65,998	68,901
% change	-2.8	3.0	5.3	0.8	2.4	2.2	4.4
Manufacturing	45,475	48,196	50,607	50,985	52,361	53,581	56,182
% change	-1.8	3.5	5.0	0.7	2.7	2.3	4.9
Durable Manufacturing	22,913	23,851	25,384	25,191	25,839	26,197	27,176
% change	-5.5	3.1	6.4	-0.8	2.6	1.4	3.7
Nondurable Manufacturing	22,562	24,345	25,223	25,794	26,522	27,385	29,006
% change	2.3	4.0	3.6	2.3	2.8	3.3	5.9
<b>Service-Producing Industries</b>	179,689	194,495	201,784	208,139	215,619	223,565	237,227
% change	1.8	4.0	3.7	3.1	3.6	3.7	6.1
Wholesale Trade	20,600	22,284	23,063	23,707	24,645	25,756	27,493
% change	3.7	3.8	3.5	2.8	4.0	4.5	6.7
Retail Trade	20,976	22,006	22,868	23,541	24,460	25,225	26,477
% change	-1.2	2.8	3.9	2.9	3.9	3.1	5.0
Finance, Insurance, & Real Estate	41,876	45,298	46,725	47,376	48,440	49,669	52,066
% change	1.2		3.2	1.4	2.2	2.5	4.8
Services	49,906	55,801	58,651	62,022	65,235	68,494	73,884
% change	3.1	5.5	5.1	5.7	5.2	5.0	7.9
Government	21,818	22,925	23,300	23,557	23,952	24,418	25,467
% change	1.9	2.4	1.6	1.1	1.7	1.9	4.3

## A \$562 million increase in state revenues is predicted for FY1997.

**R**evenue receipts for the State of Illinois have been considerably higher through the first three quarters of the fiscal year (July 1, 1995–June 30, 1996) than predicted at the beginning of the period last July. For the first nine months, total state-source revenues exceeded the level predicted by \$135 million (as established by the Illinois Bureau of the Budget (BOB), an agency of the executive branch of the state government) (Table 1). The corporate income tax and the public utility tax have been especially strong. The corporate tax revenues reflect the strong growth of corporate profits nationally, and the utility tax receipts are the result of an unusually cold winter.

The predictions for state revenues for FY1996 by the Institute of Government and Public Affairs (IGPA) of the University of Illinois at Urbana-Champaign and those of the Bureau of the Budget are consistent with one another, differing by only \$23 million (Table 2). The state legislature's Illinois Economic and Fiscal Commission forecast is less optimistic, approximately \$100 million below the IGPA estimate.

For the upcoming fiscal year (FY1997), the IGPA forecast is the most optimistic of the three forecasting organizations. The IGPA predicts an increase in revenues of \$562 million, 3.9 percent over the March BOB FY1996 forecast. (Note that the BOB numbers presented here do not include the effect of the \$65 million tax increase for riverboat casinos proposed by Governor Jim Edgar.) Analysts will be closely watching the performance of corporate profits next year to see if they continue the strong growth of the last 18 months. While the extraordinary growth

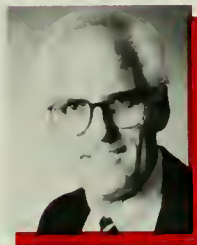
rate of the corporate income tax is unlikely to be sustained, the Illinois economy is still expected to continue its expansion through fiscal 1997. This means the state can expect at least one more year of healthy revenue growth. **IBR**

**Table 1. FY1996 Illinois State Revenue Performance**

(July 1, 1995–March 1996, millions of current dollars)

Revenue Source	Receipts		
	Target	Actual	Actual less Target
Individual Income Tax	3,897	3,922	25
Corporate Income Tax	581	640	59
Sales Tax	3,653	3,597	-56
Public Utility Tax	552	619	67
Cigarette Tax	224	225	1
Liquor Tax	42	43	1
Inheritance Tax	132	136	4
Insurance Tax	96	88	-8
Corp. Franchise Tax	78	73	-5
Interest	88	92	4
Other Tax Sources	194	160	-34
<b>Total</b>	<b>9,538</b>	<b>9,597</b>	<b>59</b>
Transfers In			
Lottery	409	412	3
Riverboat Gambling	150	167	17
Other Transfers	170	226	56
<b>Total State Sources</b>	<b>10,267</b>	<b>10,402</b>	<b>135</b>
Federal Aid	2,238	2,470	30
<b>Total Revenues*</b>	<b>12,505</b>	<b>12,872</b>	<b>165</b>

\* exclusive of short-term borrowing



J. Fred Giertz



Robert W. Resek

Both **J. Fred Giertz** and **Robert W. Resek** are professors of economics at the University of Illinois at Urbana-Champaign and members of the university's Institute of Government and Public Affairs.



**Table 2. Comparison of Forecasts of State Revenue (millions of current dollars)**

Revenue Source	FY96			FY97			FY98
	IGPA Mar	BOB Mar	IEFC Mar	IGPA April	BOB Mar	IEFC Jan	IGPA
Individual Income Tax	5,603	5,576	5,557	5,842	5,809	5,787	6,142
Corporate Income Tax	985	1,017	963	1,033	1,088	922	1,046
Sales Tax	4,847	4,828	4,850	5,083	5,020	5,006	5,343
Public Utility Tax	798	815	800	800	795	760	800
Cigarette Tax	300	300	300	300	300	300	300
Liquor Tax	60	57	56	60	56	56	60
Inheritance Tax	174	180	172	182	190	177	191
Insurance Tax	158	150	160	165	160	160	174
Corporate Franchise Tax	101	107	103	106	114	100	112
Interest	135	121	114	32	120	95	130
Other Tax Sources	280	279	266	293	282	268	300
<b>Total</b>	<b>13,440</b>	<b>13,430</b>	<b>13,341</b>	<b>13,996</b>	<b>13,934</b>	<b>13,631</b>	<b>14,598</b>
Transfers In							
Lottery	598	595	600	591	595	590	591
Riverboat Gambling	215	205	220	215	207	235	226
Other Transfers	325	325	319	315	315	300	300
<b>Total State Sources</b>	<b>14,578</b>	<b>14,555</b>	<b>14,480</b>	<b>15,117</b>	<b>15,051</b>	<b>14,756</b>	<b>15,715</b>
Federal Aid	3,335	3,335	3,335	3,291	3,291	3,305	3,300
<b>Total Revenue Sources</b>	<b>17,913</b>	<b>17,890</b>	<b>17,815</b>	<b>18,408</b>	<b>18,342</b>	<b>18,061</b>	<b>19,015</b>

**The State of Illinois can expect at least one more year of healthy revenue growth.**

### Hedging, Interest Rate Swaps (cont.)

Interest rate swaps can be used to speculate as well as hedge, and this appears to be an area where banks and other financial institutions can get themselves in trouble. Fortunately, the predominant use of interest rate swaps by survey participants was for hedging rather than speculation. The implication for savers, borrowers, and the general public is for a more stable economic environment in which financial institutions (and business firms) are less susceptible to the effects of rapid changes in interest rates, stock prices, foreign exchange rates, and other financial variables. **IBR**

### Who Loses When Casinos Win (cont.)

<sup>1</sup>Real local tax collections were regressed on a constant, casino revenues, state tax collections in the same category, and lagged state and lagged local tax collections. Three of the over 200 regressions run resulted in unstable roots combined with statistically insignificant impact coefficients. These estimates were omitted from the sample. The resulting regression coefficients were adjusted to reflect the long-term effect of casino revenues and plotted.

<sup>2</sup>More data will be needed to resolve these estimates. However, the evidence we currently have does not support the conclusion that casinos should be expected to expand sales in the surrounding economy. Using sum-of-individual-vector estimates, Alton, Galena, Metropolis, Rock Island and Peoria show average sales gains for combined sales 0-30 miles away of \$359. If Peoria is omitted from the sample, the figure is -\$46. Using estimates from regressions of total tax revenues, the same figures are -\$36, and \$14. To put these numbers in perspective, the potential increase in total economic activity should be over \$1,800 for every additional \$1,000 of casino revenue if all revenues were to come from those outside the area and were spent inside the area by owners and employees. The data do not indicate this level of tourist interest in Illinois casinos.

<sup>3</sup>See E. L. Grinols, "Development or Dreamfield Delusions: Assessing Casino Gambling's Costs and Benefits," manuscript, University of Illinois, April 1996.

<sup>4</sup>Figures for the number of out-of-state gamblers at a casino vary by time of year. In summer months, the number of gamblers traveling from other states rises. The percentage of gamblers from out of state dropped from 30 percent to less than 20 percent between August and October for the casino in Baraboo, Wisconsin, well situated near the main interstate corridor. Thompson, Gazel and Ruckman, (1995).

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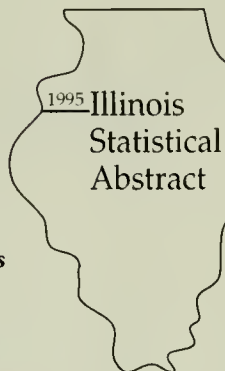
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# ILLINOIS BUSINESS Review

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Summer 1996



*Amtrak and State-Supported Passenger Trains*



*The Flat Tax and the 1996 Presidential Campaign*

*Base Closings Don't Have to Spell Disaster*

*Illinois Economic Growth to Continue*

*Illinois State Revenue Update*

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**Bureau of Economic and Business Research  
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## From the Editor

**A**PPROXIMATELY ONE YEAR AGO CHANCELLOR Michael Aiken revealed an exciting plan to take the University of Illinois at Urbana-Champaign into the 21st century. One of the seven major initiatives outlined in the 1995 plan is "Partnership Illinois."

Partnership Illinois is intended to raise the awareness of all Illinoisans about outreach programs and services delivered by hundreds of University faculty and staff to hundreds of thousands of Illinoisans each year, to respond to developing needs efficiently with coordinated efforts, and to reinforce the University's central roll in the state's economic well-being and the quality of life of each Illinoisan.

We in the College of Commerce and Business Administration (CCBA) strongly endorse Chancellor Aiken's efforts to "take the University to every Illinoisan." The *Illinois Business Review* (IBR) has taken on new life as a result of this initiative.

The CCBA is made up of a faculty expert in areas literally too numerous to list here. UIUC is a major research university, and the expertise of its faculty benefits Illinoisans in teaching, research, and service activities and programs. Members of the faculty engage in a wide range of research, much of it directed toward economic, industry, finance, and management issues of great interest to many Illinoisans.

All too often, we fail to do a good job informing you of our research accomplishments. The IBR is

dedicated to making our faculty expertise available to you by providing short articles that can be read without specialized background. While many articles may contain political ramifications, it is not our intent or purpose to promote a particular political point of view.

In this issue, Professor Emeritus John Due praises passenger rail service in the wake of the proposed reduction in subsidies necessary to maintain passenger rail service between certain communities in Illinois. Professor Fred Giertz provides a discussion of the virtues and problems associated with a flat tax that has been a subject of debate in the presidential election campaign. The Commerce Research Office has been following the economic developments in Rantoul, IL since the announcement of the closure of Chanute Air Force Base. David

Gerard reports on the remarkably rapid economic recovery in Rantoul and surrounding area.

We will try to keep you informed of other faculty research by providing a selected list of faculty papers (see below) or summaries of published research in each issue and a number to call to obtain a copy.

Finally, please let us know your interests. We hope to contribute to Chancellor Aiken's Partnership Illinois by bringing the activities of CCBA closer to you through this publication.

Richard J. Arnould



Richard J. Arnould

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## Commerce Research Papers

To obtain a copy of any of these faculty research papers, contact the Illinois Research and Reference Center, (217) 333-1958 or FAX (217) 244-0398. Some charges may apply.

M. Viswanathan, M. Johnson, and S. Sudman, "Using the Sorting Task to Examine Product Representations in Consumer Research." 96-0114

J. T. Mahoney and R. Sanchez, "Integrating Product and Process of Thought: Towards a Pragmatic Theory of Strategy." 96-0117

R. Sanchez and A. Heene, "Competence-Based Strategic Management: Concepts and Issues for Theory, Research, and Practice." 96-0118

Zhenzong-Cao, Ben S. Liu, and D. Sudharshan, "Group Preferences with Individual Updating of Judgments Based on Group Interactions." 96-0120

J. F. Due, "Railroad Passenger Service: Amtrak and State-Supported Trains." 96-0125

# ILLINOIS BUSINESS Review

**Bureau of Economic and Business Research  
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**Summer 1996 ♦ Volume 53 ♦ Number 2**

## **Amtrak and State-Supported Passenger Trains**

This article looks at the advantages of public rail transportation, the experience of Illinois and other states, and the challenges of determining the best rail policy for the future.

By John F. Due ..... Page 4

## **The Flat Tax and the 1996 Presidential Campaign**

It could be argued that a relatively low, flat-rate, broadly based federal income and business tax proposal could offer advantages to candidate Robert Dole and even to taxpayers

By J. Fred Giertz and Timothy R. Watts ..... Page 8

## **Base Closings Don't Have to Spell Disaster**

Although there were great differences in the impact of the closing of Chanute Air Force Base on various types of businesses, many of the expected ill effects have been mitigated by planning and careful exploitation of the community's strengths.

By David Gerard ..... Page 12

## **Illinois Economic Growth to Continue**

The Illinois economy will experience strong personal income growth.

By Harvey B. Westbrook, Jr. .... Page 16

## **Illinois State Revenue Update**

State revenues for the year will exceed the official beginning-of-the year predictions by about \$100 million.

By J. Fred Giertz and Robert W. Resek ..... Page 19

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**Cover Photo:** The state-subsidized *Illini* pulls into the Champaign station.

Photo: Susan R. Hartter

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# ***Amtrak and State-Supported Passenger Trains***

By John F. Due

**In the 1990s, Amtrak has had to cut service and increase charges to the states for state-supported trains. The author looks at the advantages of public rail transportation, the experience of Illinois and other states, and the challenges of determining the best rail policy for the future.**

**I**N 1971, CONGRESS ESTABLISHED AMTRAK—THE National Railroad Passenger Corporation—to operate a nationwide passenger train system. The railroads were rapidly ending their passenger service, which operated at a deficit estimated to be \$1.7 billion in 1970, yet there was strong support for the retention of a basic network of trains. Amtrak was a semi-governmental enterprise, designed to be for-profit, technically not a governmental agency, but subject to direct government control. Railroads had the choice of joining the system and providing funds for the privilege of discontinuing their passenger trains; if they did not join they could not discontinue trains for four years. Amtrak was not initially authorized to provide commuter service, but power to manage such services was subsequently granted.

When Amtrak began, it faced substantial difficulties: the equipment acquired from the railroads was worn and obsolete; some railroads, which regarded Amtrak as a nuisance, were not highly

cooperative; and Congress failed to provide adequate funds to carry out the assigned task. Nevertheless, Amtrak had considerable success in improving passenger service. Annual ridership increased from 16.9 million in 1973 to 22.1 million in 1993. The deficit fell: revenues were covering only 54 percent of avoidable cost—the cost that would be avoided if the trains were not operated—in 1973 but 80 percent in 1993.

After the early 1990s, the trend toward overall improvement was reversed; ridership fell, though only slightly, and the deficits increased. Given the reluctance of Congress to provide more funds, reductions in service resulted—causing further losses in traffic.

As this is written, the long-range future of Amtrak is in serious doubt. Continued cutbacks and service deterioration would bring a return to the unhappy situation before Amtrak was founded. Yet Congress is unlikely to raise funding. One general approach to



John F. Due

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John F. Due is an emeritus professor of economics at the University of Illinois at Urbana-Champaign. The author wishes to thank Qiumei Yang for research assistance with this project. This article is a part of a larger study, "Railroad Passenger Service: Amtrak and State Supported Trains," available from the author on request. He is also greatly indebted to officials of the Illinois Department of Transportation and to those of other states for information.

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a solution is to reduce materially the service on the longer-distance, essentially vacation, trains, raise the fares, and provide better service for the corridor and similar services for which daily (or at least five-day a week) service is imperative.

## State Supported Trains in Illinois

The original act that created Amtrak provided, in Section 403(B), for additional trains beyond the national network if states would sponsor them and cover 65 percent of any operating deficit. Illinois was one of the first states to take advantage of this provision and has continued to do so on much the same pattern down to the present. But current changes in federal policy are now creating major problems for financing state-supported trains.

In Illinois there are four state-supported routes:

### ◆ *Chicago-Springfield-St. Louis*

*The State House*, operated since 1972, has an early morning departure from St. Louis and evening departure from Chicago. This train serves Springfield, Bloomington-Normal, Lincoln, and other cities. The train carried 83,829 passengers in calendar 1995. Until June 28, 1996, the state also supported the *Loop*, which carried 37,607 passengers in the last year; it departed Chicago in the morning and Springfield in the afternoon. It was discontinued in order to reduce costs. On this line two daily Amtrak trains not supported by the state operate as well.

### ◆ *Chicago-Champaign-Carbondale*

The *Illini* has been operating since 1971, though with some changes. The train carried 108,000 passengers in 1994, many of them university students. Carbondale and Champaign provide a large portion of total passengers. The train operates both north and southbound in the afternoon. Since 1986, the only northbound morning service is the *City of New Orleans*, not subsidized by the state.

### ◆ *Chicago-Galesburg-Quincy*

The *Illinois Zephyr* serves cities to the west of Chicago; of these, the most traffic is provided by Galesburg, Macomb, and Quincy. The train carried 84,579 passengers in 1995, about the same as in 1994. The train operates inbound to Chicago in the morning, outbound in the evening. Galesburg is also served by Amtrak's long-distance trains, which are not state supported.

### ◆ *Milwaukee*

The last of the supported routes is that of the *Hiawathas*, from Chicago to Milwaukee, which currently runs six round trips a day. The trains carried 577,405 riders in 1995.

The subsidy requirements of the four services as reported by the State Department of Transportation

are shown in the table.

The appropriation for 1996-97 is \$6.5 million; thus a deficit will result. The total overall deficit as determined by Amtrak for the Illinois trains is \$18 million, of which the share for Illinois is currently 45 percent. But as of 1999 the state must cover all of an estimated \$18 million deficit.

There are two principal reasons for the increase in the required subsidy: the shift of Amtrak charges from short-term avoidable cost in determining the charge to the state, to long-run avoidable cost, thus including capital costs, and then to fully allocated cost (1997) and the requirement that the state now cover the entire deficit.

## Alternatives That Could Be Followed

There are several alternatives to meet the requirements for higher subsidy:

◆ Discontinue support of the trains. This would save the state several million dollars a year—but would cause the loss of externalities, that is, the gains to persons other than the users and to society as a whole, of the present service and the consumer benefits provided users by the present trains. The prime externality is the lessening of highway and street congestion, with consequent lessened demand for highway improvements. The use of rail likewise provides some net gain with regard to pollution, energy use, and lowered accident rates. A basic consideration is that the use by some persons of rail instead of automobile transport conveys benefits to persons not using the trains—those who continue to drive but encounter less congestion—and the taxpayers who face less demand for highway construction and improvements. Much of Amtrak's ridership base consists of people who do not own cars, are physically unable to drive, or fear driving in large cities.

◆ Reduce costs and, thus, the needed subsidy. There are several possible avenues to be explored. One is labor cost. If the state is to continue to subsidize rail service, it has a good position directly or through Amtrak to bargain with the unions for further adjustments.

## ***The long-range future of Amtrak is in serious doubt.***

### ***Subsidy Required for State-Supported Trains in Illinois (in millions of dollars)***

**Subsidy requirements are increasing due to increased charges from Amtrak.**

	1996	1997
Champaign-Carbondale	1.947	2.860
Quincy	1.600	2.206
St. Louis: <i>State House</i>	2.250	2.006
Milwaukee	0.603	0.705
Expected totals*	6.400	8.100

\*(includes miscellaneous and elimination of the *Loop* after 1996)

## ***The Illinois legislature's plan involved some fare increases and some reduction in service—but this was rejected by Amtrak.***

A second is to consider another operator particularly the railroads. Some states, on commuter operations, negotiate directly with the railroads involved. Maryland, for example, has done so on two routes.

◆ **Reduce service.** One alternative is, of course, to reduce service—by curtailing the frequency of trains. For the most part, however, for state-aided trains, service at least each work day is imperative to follow the preferences of the users and maintain ridership.

The plan that the administration and the legislature developed involved reduction in service on each route by one train a week, and an increase in fares. But Amtrak rejected these changes, on the grounds that there would be little cost reduction and the fare increases would reduce ridership significantly.

The result of the rejection of these proposals has been a deficit in the state support for the current year, estimated at between \$500,000 and \$800,000. One alternative now being considered is to end support for the Milwaukee trains; it is not known whether Wisconsin would take over full support of these trains, which are among the least unprofitable in the Amtrak system.

### **Other Possible Options**

First, there is some possibility of rescheduling trains to increase traffic. On the Illinois Central line the lack of a dependable morning train to Chicago seriously deters use of the service. Rescheduling requires the railroads be willing to approve the changes. Some of the trains, such as the one to Quincy, have a relatively late scheduled arrival in Chicago and at their outer destinations.

Secondly, a 1994 IDOT survey of riders on the state-supported trains suggests possible readjustments in the fare structure. One significant set of responses is the relatively high percentage of riders (37 percent) who list professional occupations, have college degrees (41 percent), and/or have incomes in excess of \$70,000 a year (27 percent). All of these figures suggest that there is considerable potential for charging higher fares to passengers in these groups, if a means can be devised to do so. This is done now by

providing "custom class" reserved seat service, with 13 seats, on all except the Milwaukee trains.

Even more significant is the surprising data of frequency of travel. In the survey, about one-fourth of respondents indicated that this was their first trip, and one-half indicated that they took less than six trips a year. Only 1 percent indicated two or more trips a week. These are, in no sense, commuters. A major objective is to encourage riders to make more trips, perhaps by selling multiple-use tickets at reduced fares and giving discounts for two, three, or four persons travelling together.

### **The Overall Experience of Other States**

In 1995–1996 nine other states had state-supported trains under Section 403 and are currently continuing to support these trains. Their experiences are as follows:

#### ◆ *California*

The state supports three sets of trains: the *San Diegos*, eight trains, are operated each day during the week from Los Angeles to San Diego, 129 miles, and four trains a day north from Los Angeles to Ventura and Santa Barbara, 103 miles; the *San Joaquins*, Emeryville (Oakland) to Fresno and Bakersfield, 312 miles, four trains each way a day; the *Capitols*,



In 1995 the *State House* carried 83,829 passengers. It serves Springfield, Bloomington-Normal, and other cities between Chicago and St. Louis.

Photo: Courtesy Illinois Department of Transportation

Sacramento-Oakland-San Jose, 134 miles, three trains a day.

The volume of traffic is heavy: 1.5 million annually on the *San Diegans*, 525,000 on the *San Joaquins*, 350,000 on the *Capitols*. The state has borne the entire cost of the deficit, \$41.7 million in 1995–1996, \$47.2 million budgeted for 1996–1997 and an estimated figure of \$52 million by 1997–1998.

#### ◆ *Missouri*

The State of Missouri supports two trains, both between St. Louis and Kansas City. In 1996 the state is paying \$2.9 million; the legislature has approved \$3.6 million for FY1997.

#### ◆ *Michigan*

The state supports the Michigan portion of the *International*, a Chicago-Toronto train via Port Huron, and the Chicago-Grand Rapids train, now both daily trains. The state provided about \$1,897,5000, on a long-term avoidable cost basis; the number of annual riders in 1995 was 114,000 on the Port Huron train and 44,887 on the Grand Rapids train.

#### ◆ *New York*

The state supports the portion between Albany and Montreal of Amtrak's New York-Montreal train.

#### ◆ *North Carolina*

The state supports two trains: the North Carolina portion of the *Carolinian*, Charlotte to New York, and the *Piedmont*, between Charlotte and Raleigh. The riders are covering about 75 percent of the cost of the service.

#### ◆ *Oregon*

The state supports one train daily between Portland and Eugene, plus throughway bus service. The state was paying Amtrak \$75,000 a month in 1995; it is now paying \$100,000 per month.

#### ◆ *Vermont*

The state supports one north-south train, Essex Jct. (Burlington)-Brattleboro. In 1995 66,846 riders were carried; the FY1996 subsidy is \$750,000.

#### ◆ *Washington*

The State of Washington supports two trains, one Seattle-Portland, the other Seattle-Vancouver, B.C. The former carries about 79,000 passengers a year, the latter about 90,000. The annual cost to the state is \$2.5 million for each train.

#### ◆ *Wisconsin*

The state shares the cost of the Chicago-Milwaukee service paying 75 percent of the deficit.

In addition to these intercity trains, Amtrak manages under contract extensive rail commuter service in California, Florida, Maryland, Massachusetts, New Jersey, and Virginia.

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## ***The great merit of retaining the trains is the lessening of highway congestion and pressure for additional highway improvements.***

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### **Conclusion**

Policies relating to the state-supported trains should be determined by the Illinois administration and the legislature by weighing the relative gains from retaining service and the cost to the state of doing so. The great merit of retaining the trains is the externality benefits—primarily the lessening of highway congestion and pressure for additional highway improvements, particularly in the Chicago metropolitan area, plus gains to the users who are receiving benefits from the service in excess of what they are willing to pay. There are also benefits to the communities served, both to their residents as individuals, especially those who do not have cars or do not wish to drive, and in terms of location of homes and businesses. Many communities served by Amtrak have little or no bus service. Relatively cheap, comfortable, convenient transport to Chicago is a factor in luring new businesses to the area. These benefits are impossible to measure, but they are certainly real.

These gains must be balanced against the cost to the state—which will be greater than in the past. But even \$18 million a year, the maximum foreseen, is less than one-tenth of 1 percent of the total state expenditure. In contrast, according to IDOT the cost to build one mile of urban expressway is typically \$140 million, of rural expressway, \$7 million. Currently there appears to be strong sentiment in Springfield that the cost of the trains must be reduced and the deficit therefore lowered, if support is to be continued. Hopefully this can be accomplished. But the support of the trains could justifiably become a regular state budget item. **IBR**



# The Flat Tax and the 1996 Presidential Campaign

By J. Fred Giertz and Timothy R. Watts

**It could be argued that a relatively low, flat-rate, broadly based federal income and business tax proposal could offer advantages to candidate Robert Dole and even to taxpayers.**

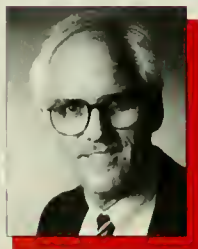
**T**AX ISSUES ARE LIKELY TO PLAY AN IMPORTANT ROLE in the upcoming presidential campaign. In addition to the usual debate about whether taxes are too high and a burden for citizens or too low leading to large continuing deficits, more basic issues about taxation may also be raised in the campaign. In fact, they already have played a major role in the primaries. Republican candidate Steve Forbes based his whole candidacy on the issue of changing the existing federal individual and corporate income taxes to a so-called flat tax.

The demise of the Forbes candidacy, however, may not spell the end of the flat-tax idea. With former Senate Majority Leader Robert Dole trailing President Bill Clinton in the polls, many Republicans, including Forbes, are urging Dole to propose dramatic tax reform to energize his candidacy. From the debate surrounding the Forbes campaign, it is apparent that there is considerable misunderstanding about the concept of the flat tax and how it relates to our present system. The flat-tax idea represents a fundamental change. It would not only change the income tax rates but would also dramatically change the base on which the tax is levied.

## Older Flat-Tax Proposals

Suggestions for a flat-rate income tax have been around for many years. They have come from such diverse points on the political compass as conservative economist Milton Friedman in the 1960s, Democratic Congressman Richard Gephardt and Senator Bill Bradley in the early 1980s, and even former California Governor Jerry Brown in the 1992 Democratic presidential primary. These plans called for the modification of the existing individual income tax in two ways. First, they would replace the existing structure with its graduated tax rates with a single, low "flat" rate. A rate of around 20 percent has often been suggested. Note that in the 1950s the highest marginal income tax rate was as high as 91 percent and was 70 percent as late as 1981. In order to maintain federal revenues, the new lower rate would be applied to a number of sources of income not presently taxed—and many deductions and other exclusions would be eliminated.

Such proposals have a number of attractive features. The broader base would lead to a fairer treatment of individuals with the same ability to pay (the fundamental equity principle upon which the



J. Fred Giertz

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income tax is based) since all sources of income would be treated similarly. In addition, the broader base would discourage tax avoidance (the use of legal loopholes to reduce tax liability) in which individuals and businesses base their decisions for work and investment on tax considerations rather than on the underlying economic factors. Tax loopholes not only cost the government revenues, they also result in inefficiency by channeling resources to less productive areas in the search of tax savings. The low rate would discourage tax evasion (the reduction of taxes by illegal means) and avoidance but would encourage greater work effort and more investment. It should be noted, however, that the size of this supply-side response is the subject of considerable debate among both politicians and economists.

Flat-tax proposals would deal with equity among taxpayers of different income levels by providing a very large combined exemption and standard deduction, in the range of \$25,000 to \$40,000 for a family of four, on which no income tax would be paid. This compares with \$16,550 for a family of four in 1995. The tax would be progressive because of this large exclusion rather than because of graduated tax rates.

While the "old" flat-tax ideas were never fully embraced in federal tax law, they did have an important impact on tax policy in the 1980s—culminating in the tax reform of 1986 spearheaded by President Ronald Reagan.<sup>1</sup> The 1986 law reduced the number of marginal tax rates to two: 15 percent and 28 percent. The 28 percent top rate was down from the 50 percent in effect from 1981 to 1986 and much below the 70 percent highest rate that prevailed before 1981. The 1986 reform also broadened the tax base by eliminating many tax shelters, especially in the area of real estate, taxing long-term capital gains as ordinary income, and eliminating the deductions for state and local sales taxes.

Changes that have come about since 1986 have led to the erosion of the 1986 reforms. Tax increases in 1990 (when President George Bush violated his 1988 campaign pledge, "read my lips—no new taxes") and in 1993 under President Clinton have resulted in a top marginal rate of nearly 40 percent. These increases were designed to raise more revenue to deal with the persistent federal deficit, but they did so by creating more brackets as well as higher marginal tax rates.

## New Flat-Tax Proposals

Newer proposals go substantially beyond the goals of the older plans. Not only do they call for a broad-based, low, flat-rate tax system, they also call for integrating the corporate income tax with the

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## ***Tax loopholes cost the government revenues and result in inefficiency by channeling resources to less productive areas in search of tax savings.***

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system of flat individual income taxation. Even more important, the plans call for a move to taxing consumption rather than income by making investment fully deductible at the time the costs are incurred (expensing rather than depreciating investment costs).

These ideas trace their origin to Robert Hall and Alvin Rabushka, economists at the Hoover Institution at Stanford University, who introduced the notion in 1981. Their ideas are closely linked to the Steve Forbes flat-tax plan and another proposed by House Majority Leader Dick Armey (R-Texas) and Senator Richard Shelby (R-Alabama).<sup>2</sup> Surprisingly, a similar plan was introduced by current Clinton Chief of Staff Leon Pannetta when he was a Democratic congressman from California.

The new proposals call for the existing individual and corporate income taxes to be eliminated and

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## ***The tax base would be broadened by eliminating almost all current deductions — charitable contributions, mortgage interest, and state and local taxes.***

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replaced by an individual wage tax and a business (both corporate and unincorporated firms) tax, both of which would employ a common, flat tax rate in the range of 20 percent.

The individual wage tax would, in a sense, be narrower than the current individual income tax in that it would not directly include income from interest, dividends, rents, or capital gains. Many of these items, however, would be taxed under the broadened business tax. Pension benefits, but not contributions, would be also be taxed. The large combined exemption and standard deduction mentioned earlier would make the system somewhat progressive. Most individual taxpayers could file a

<sup>1</sup>Illinois readers will note that the state's individual income tax is basically a flat-rate tax with a 3 percent tax rate applied to a base that is generally broader than that used by the federal government.

Interested readers may wish to access Congressman Armey's Flat Tax Homepage at <http://www.house.gov/armey.flattax>





Under a flat-tax scheme most individuals may be able to file a "post-card" sized return vastly simpler than current forms.

so-called "postcard" sized tax return that would be vastly simpler than current filing requirements. Because of the high combined exemption and deductions (over \$40,000 for a family of four), low-income taxpayers would owe no tax—and might not even be required to file a return. The individual tax base would also be considerably broadened by eliminating almost all current deductions such as those for charitable contributions, mortgage interest, and state and local taxes.

Much of interest, dividends, rents, or capital gains now taxed as individual income would be taxed under the flat-rate business tax. Unlike the current corporate tax, which taxes net income or profit, the business tax would tax all corporate receipts less wage payments and pension contributions, the purchase of intermediate goods and services, and purchases of investment equipment. Interest would not be a deductible business expense. The logic of the integrated flat-rate tax is to tax income once and only once (either at the business level or the individual level) at the same rate. For example, while interest is not included on the individual return, it is not deductible at the business level so it would be taxed at that level. The costs of benefits

such as health insurance would not be deductible for business as they are under current law. The plan would effectively eliminate the current double taxation of corporate profits by taxing all corporate income at the business level, but excluding it at the individual level. Under current law, corporate profits are taxed under the corporation income tax. The profits are taxed again under the individual income tax when they are distributed to shareholders as dividends. Many individuals (such as landlords, farmers, and the self-employed) would have to file a simple business return in addition to their individual form.

The full deduction of investment expenses at the business level is a key feature of most flat-tax plans. In effect, it shifts the tax base from income to consumption. Because of the close relationship between savings and investment, exempting investment is roughly equivalent to exempting savings and, thus, taxing only the consumption component of income. The fact that the firm deducts pension contributions when they are paid and individuals pay taxes on their pension benefits when they receive them is also consumption-based. Unlike other consumption-based taxes such as the sales tax and value added tax, the flat tax would be somewhat progressive and would take into account variations in ability to pay based on family size.

Proponents of the flat tax cite several important advantages including increased simplicity and efficiency. A fully implemented flat tax would be much simpler for both individuals and businesses. It would also be fairer in the sense that all sources of income would be treated the same, although it might be criticized for reducing overall progressivity. Most important, it would reduce tax avoidance, with its losses in revenue and efficiency, by eliminating incentives to make economic decisions based on tax reasons. Since all income (business or individual) would be taxed at the same rate, and since no income would escape taxation, most tax avoidance schemes would be useless. The low tax rate would also reduce incentives for tax evasion. In addition, supporters of a consumption-based tax argue that the change would encourage savings and investment, which would lead to increased economic growth for the country.

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***Since all income (business or individual) would be taxed at the same rate, and since no income would escape taxation, most tax avoidance schemes would be useless.***

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## **The Politics of the Flat-Rate Tax**

Could Senator Dole benefit politically by adopting the flat-tax plan as a key part of his campaign? Such a plan has political advantages, but carries some baggage as well. In a recent poll, respondents rated the existing federal income tax as the "worst"



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***In a recent poll, respondents rated the existing federal income tax as the "least fair" of all other major taxes, including the local property tax.***

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or "least fair" of all other major federal, state, or local taxes, including the local property tax. In another poll, 49 percent of respondents favored a flat-rate federal tax, while 39 percent opposed the concept. In order for the idea to succeed, support would have to come from a broad-based coalition that would be willing to trade the existing patchwork of preferences for a simpler and more efficient, broad-based, low rate system.

In fact, such a plan would likely be opposed by a disparate set of interest groups who benefit from the current system—including state and local governments (whose income and property taxes would no longer be deductible), charities (who depend on the deduction for contributions to stimulate donations), and real estate interests (who fear the loss of the mortgage interest deduction). There would also be numerous transitional issues in moving from the current system to the reformed one. For example, should the depreciation deduction still be allowed on plant and equipment purchased before the new rules (which expense investment costs) come into effect? Should home owners who purchased homes under past tax rules be allowed to continue to deduct mortgage interest? The problem confronting policymakers is that more generous transition rules would require a higher new tax rate to maintain revenues. Many politicians might also oppose the change in the tax system since the stock and trade of politicians is providing benefits to narrow, focused interest groups in exchange for support. The tax laws have proven to be a fertile ground for this type of exchange.

From candidate Dole's perspective, a flat-rate tax might appear to be a high-risk, but potentially high-return, strategy. He might prefer to call for an across-the-board tax reduction within the current system or targeted tax reductions for special interest groups. To the extent that taxes have been an issue in early stages of the presidential campaign, President Clinton and Mr. Dole have engaged more in a traditional

bidding war to attract taxpayers (for example, tax credits for families and for college students and special treatment of capital gains) rather than focusing on fundamental reform. Given Dole's support of the balanced budget amendment and his reputation for prudence in the area of taxes, however, a major tax cut in the presence of continuing deficits is unlikely. A complete shift to a new system that would maintain revenues while reforming the current unwieldy system might appear to be an attractive alternative.

It would be a risky strategy in that it would open the door for the Democrats to appeal to groups who appear to lose from the change. For example, under most flat-tax plans, low-income and high-income citizens might well receive a reduction in their tax burdens while many middle-income citizens would end up with a slightly higher rate. Even though it could be argued that in the long run almost everyone would benefit from a stronger economy, the scheme would present some difficult political problems in the short run. The plan would also have to be defended against charges that taxpayers could no longer deduct their and health insurance or that homeowners could no longer deduct mortgage interest payments. To give in to these interests groups by exempting certain types of income would both weaken the basic advantages of the proposal and require a higher overall rate for all remaining income sources.

Defending the flat-tax plan against these charges would require a level of advocacy and commitment that so far has been lacking in the Dole campaign. If Mr. Dole were able to rise to the challenge, the plan might counter arguments that he has no new ideas or vision and that he would merely be a "caretaker" as president. On the other hand, if he puts a major tax reform forward and does not support and defend it vigorously, it might well prove to be a disaster. Given his current prospects, however, it is a risk that is well worth taking if he really believes in the reforms. **IBR**

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***Under most flat-tax plans, both low-income and high-income citizens might have a reduced tax burden while many middle-income citizens would end up with a slightly higher rate.***

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# Base Closings Don't Have to Spell Disaster

By David Gerard

**Although there were great differences in the impact of the closing of Chanute Air Force Base on various types of businesses, many of the expected ill effects have been mitigated by planning and careful exploitation of the community's strengths.**

*This is the final article of a series reporting the results of surveys of Rantoul, Illinois, businesses on the consequences of the closing of Chanute Air Force Base in 1993.*

**I**N 1989 THE FEDERAL GOVERNMENT ANNOUNCED the closure of Rantoul's Chanute Air Force Base and formally decommissioned the base in September of 1993. Although many small firms went out of business and others suffered adverse effects, Rantoul has had fairly robust economic growth since the base closure. The unemployment rate in Rantoul has consistently been at or below the national average, and dozens of new businesses have located in the community. Since 1990 the Commerce Research Office at the University of Illinois at Urbana-Champaign has been reporting on the impact of the base closure on the Rantoul economy. This final report looks at events during and after the decommissioning phase to see why the base closure had different effects on various sectors of the Rantoul economy and to discuss the determinants of Rantoul's economic growth since the base closure.

The primary conclusion drawn from the study is that the effects of the base closure for each sector were determined by principal market for its goods and services. For instance, many local retailers and professional services lost an established market for their products and consistently reported negative effects from the base closure. In contrast, Rantoul's

light industrial firms have a more regional and national market. Firms in this sector did not report any deleterious effect of closure. The evidence shows that most of the negative local economic consequences occurred between the time of the announcement and the actual closure of the base.

Following the closure, the federal government ceded control of the base property and facilities to the Village of Rantoul through grants from the Federal Aviation Administration, the Department of Education, and the Department of Interior. The village government has successfully built on many of Rantoul's location-based economic strengths by leasing and selling most of these acquired properties. The effect has been a transfer of land and capital assets between the public and private sectors. As a result, some Rantoul businesses expanded onto the base, new businesses have located in Rantoul, and there has been an addition of more than 1,400 new jobs on the former base properties.

## The Decommissioning Phase

The Commerce Research Office collected data through biannual surveys of private and public



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sectors of the village from 1990 to 1994, a period that overlapped the decommissioning phase. Respondents provided information about employment and revenue levels, changes in these levels from the previous six-month period, and projections for the coming six months. To account for differences across different types of firms, businesses were divided into six categories: retail, industrial, financial, artisan/contractor, financial, and professional.

Not surprisingly, the results of the study show that the impact of the base closure is correlated with the market for a firm's product or service. Sectors that rely on the local population—and, in particular, base residents—were more vulnerable to changes caused by the base closure. For instance, in the two years following the announcement of the closure, approximately 30 firms went out of business or moved out of Rantoul. These firms were mostly small retailers and professional firms—one example was a locally owned pizza restaurant. In contrast, some firms providing private dental and medical services reported that the base closure would have no impact on their operations. The likely explanation for this is that those services were provided to military personnel on the base.

The surveys questioned firms about how much the base closure would adversely affect their operations and how much the expansion of the Rantoul economy would aid operations. The chart plots the expectations of the retail, industrial, and professional sectors about the negative impact of the base closure over the period (1989–1993) when closure had been announced but not yet completed.

On one extreme, the retail sector consistently reported expectations of negative effects of the base closure. Because retail establishments cater to local demand, changes in the level of demand or the types of goods and services in demand may be especially bad for businesses within this sector. Retailers consistently reported that the effects of the base closing were more than incidental. They also reported skepticism about the benefits from expanding business in the community. The projections for the Rantoul retail climate improved only incrementally as the survey period ended in 1994. It is possible, however, that some retailers could have been affected by competition from a massive retail development in northern Champaign (about 10 miles away) as much as by the base closure.

On the other extreme were firms in the Rantoul industrial park. These firms never sold a large percentage of their output to the base or local residents, nor did they rely on the base for services or production inputs. This sector consistently reported that the base closure had little impact on their businesses. Firms in the industrial park are more vulnerable to

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## ***Rantoul businesses expanded onto the base, new businesses have located in Rantoul, and 1,400 new jobs have been added on the former base properties.***

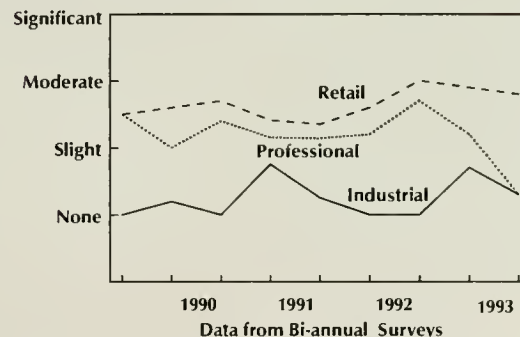
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changes in regional and national economic trends than local economic conditions. Two firms reported expansion during the period immediately following the closure announcement, and overall the industrial park has added more than 1,500 jobs since the announcement of the base closure.

An interesting intermediate case is the professional sector, which includes firms that provide insurance, legal, financial, medical, and dental services. When the surveys began in 1989 this sector reported expectations about the same as the retail sector. That is, on average these firms expected the base closure to have an adverse effect on their revenues and employment levels. Throughout the survey period the expectations of this sector were between response averages reported by retail sales and industrial park members. By the time of the actual closure, however, the professional sector was reporting the same expectations as the industrial sector. The inference may be that the anticipated drop in demand may not have materialized, perhaps, or the expansion of the local economy offset the loss of consumers from the base.

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### ***Expected Negative Impact of Air Force Base Closure Reported by Retail, Professional, and Industrial Sectors***



Though no sector reported significant negative impact, the retail sector, more dependent on base residents for sales, suffered most.

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Photo: Courtesy Village of Rantoul.

Rantoul Products Textron has leased a hanger on the former air base for its light manufacturing operations.

The survey results indicate that by the second half of 1993 most respondents reported that there was not much of a relationship between the base closing and future economic fortunes, even though the base had not yet closed.

## Economic Activity since the Base Closure

The primary conclusion from the survey data is that a community solely reliant on base residents as a source of demand for goods and services will be more adversely affected by a base closure than a community with a more diverse economic base. The closure of the base is only part of the story. Despite any negative effects, the community may benefit from an infusion of land and capital from the federal government. The Rantoul village government has redeveloped the base by leasing and selling the properties to firms already located in the area, as well as by attracting new businesses.

Several of the community's characteristics allowed local officials to capitalize on the acquired endowment of base land and infrastructure. The village is located near major north-south and east-west

interstate highways, which makes it accessible for distributing its products. In addition, it has an industrial park with seven manufacturing companies. It is also only a few miles north of the University of Illinois at Urbana-Champaign. The local government took advantage of a grant from the U.S. Department of Commerce to help it identify and exploit these strengths.

The air base provided a fairly stable level of government expenditure into the community. In effect, the base closure transferred this public investment from the federal to the local level, and local officials have been very successful attracting private investment in the former base properties. Certainly the Rantoul expansion has benefited from stable regional and national economic conditions. While private investment has been robust, the local economy will be more susceptible to changes in regional and national economic trends than when the federal government supplied a stable source of income.

Two firms from the industrial park, Caradco, a manufacturer of wood-frame windows and patio doors, and Rantoul Products Textron, a division of Chrysler that produces such automotive components as instrument panels and door trim panels, were among the first lessees of the former base properties. Certainly, an existing industrial base was one component that eased the economic transition. The expansion from the industrial park accounts for roughly one-third of the over \$1 million in annual lease revenue, and less than 20 percent of the more than 1,400 jobs that have been created on the former base properties. The village also has leased properties to dozens of other private and public entities. These include business germane to air transportation such as Reliant Air Carrier Maintenance, medium-size operations such as Ameritech, as well as many small retail and professional services leasing office space. In addition, the possible location of the federal Defense Finance and Accounting Services on the former base would provide an additional 750 jobs to Rantoul.

The village has sold portions of the base properties and has several sales pending. For instance, local officials have sold the base housing units to a private developer. Revenue from these sales will amount to

several million dollars. Portions of the lease and sale revenue will go toward upgrading and maintaining base facilities and other local infrastructure.

The village is also working with departments at the University

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***By the second half of 1993 most respondents reported that there was not much of a relationship between the base closing and future economic fortunes.***

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of Illinois. For instance, faculty and students are currently using the facilities for pavement research supported by the Federal Aviation Administration for runways, and the Department of Transportation for highways. As a result, faculty are able to market consulting services to airports around the world.

While there has been much economic development on the former base properties, there have also been several additions for the public benefit. The FAA disposed of several tracts of land for an aviation history museum, and the Interior Department ceded several parcels of land for parks and recreational uses.

An established industrial sector is clearly a valuable component of demand for use of the base properties, but it does not appear to be a necessary condition for attracting private investment. Ironically, the base staying open as long as it did may have gotten in the way of the economic transition.

## A Final Word

Unquestionably, any base closure will substantially alter local social and economic institutions by decreasing the population and changing the characteristics of the remaining population. The evidence from the Commerce Research Office study indicates that there is, indeed, a correlation between the local markets and the likely impact of a base closure. In which cases the base residents comprise a significant portion of the market for goods or services, the business will likely be more severely affected.

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***Since the announcement of the closure of Chanute Air Force Base, there appears to be fairly robust economic activity on and off the base properties.***

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After the base is closed, the local government receives a large endowment of land and capital from the federal government. The eventual effects of the base closure on the local economy will depend largely on the ability of a community to integrate its existing assets with the newly acquired base resources. Attracting investment to fill the void left by the base closure is a critical dimension of the transition process. Rantoul officials have successfully attracted both private and public investment to the former base properties. While an existing industrial base may be one source of demand for base properties, it does not appear to be a necessary condition for leasing and selling them. Since the announcement of the closure of Chanute Air Force Base, there appears to be fairly robust economic activity on and off the base properties. Certainly the economic transition in Rantoul was aided by an aggressive marketing campaign and fairly positive regional and national economic conditions. **IBR**

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# Illinois Economic Growth to Continue

By Harvey B. Westbrook, Jr.

## The Illinois economy will experience strong personal income growth through 1998.

**S**TRONG GROWTH IN REAL PERSONAL INCOME is expected in Illinois through 1998 (Chart).<sup>1</sup> Real total personal income should grow 2.1 percent in 1996, 3.5 percent in 1997, and 2.9 percent in 1998. Much of the increase comes from service-producing industries, which are projected to grow 4.7 percent in 1996 and 3.8 percent in 1997, compared with 2.5 percent and 1.5 percent in 1993 and 1994. A large portion of this growth reflects a continuing shift of Illinois towards a service economy. High personal income growth in most sectors indicates a healthy economy through 1998.

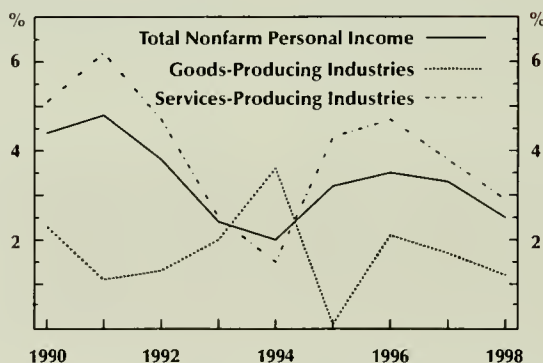
Illinois employment will grow moderately through 1998, reflecting a national demographic trend. Major national forecasting organizations, the WEFA Group and DRI/McGraw Hill, predict relatively low employment growth for the nation due to slower growth in the adult population. An increase of

only 1 percent in the adult population is expected through the next decade. Expansion of the labor force will not be much higher. Illinois employment levels are expected to follow the trend. Employment in service-producing industries will be more robust than in goods-producing industries. However, within the good-producing industries, much of the growth will come in construction and trade. Employment in goods-producing industries is expected to in-

crease 2.2 percent in 1996 and 1.2 percent in 1997. Expanded employment in goods-producing industries is driven by a 2 percent growth in employment in manufacturing in 1996. The Illinois Econometric Model (IEM) projects steady employment growth in durable manufacturing through 1998.

Employment in the services-producing industries is expected to grow 2.7 percent in 1996 and 0.8 percent in 1997. The expansion is the result of

**Growth in Illinois Personal Income**



**Much of the growth of personal income in services reflects a continuing shift of Illinois towards a service economy.**

<sup>1</sup>Note that real personal income, total retail sales, and total gross state product are reported in terms of 1992 dollars following the convention of the economic data used to generate the forecasts.



Harvey B. Westbrook, Jr.

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significant increases in employment in the services subsector. A portion of the growth can be explained by increased employment in services-producing industries, projected to grow 3.8 percent in 1996 and 2 percent in 1997.

Strong growth in real gross state product is expected in 1997. Total real gross state product is expected to grow 0.6 percent in 1996 and then to expand 5.5 percent in 1997. This jump will be driven by very high growth in the services-producing subsector.

Retail sales is expected to grow moderately over the period. Total retail sales are expected to grow 3

percent in 1997 and 2.3 percent in 1998, significantly higher than the 0.9 percent expansion in 1996. The rates for retail sales of durable and non-durable goods will follow similar trends.

The Illinois economy will experience healthy growth in gross state product and personal income. While projections of employment growth are less optimistic than in the past, statewide employment growth will keep pace with national trends. **IBR**

## Illinois Forecast Statistics

### EMPLOYMENT (thousands)

	1992	1993	1994	1995	1996	1997	1998
<b>Total Nonfarm Employment</b>	5,226.8	5,308.8	5,405.9	5,543.6	5,687.5	5,737.8	5,790.0
% change	0.1	1.6	1.8	2.5	2.6	0.9	0.9
<b>Goods-Producing Industries</b>	1,125.6	1,139.1	1,149.1	1,180.3	1,206.3	1,220.8	1,231.8
% change	-2.6	1.2	0.9	2.7	2.2	1.2	0.9
Manufacturing	911.3	925.6	930.4	951.3	969.8	978.0	982.8
% change	-2.3	1.6	0.5	2.2	2.0	0.8	0.5
Durable Manufacturing	534.7	544.2	548.1	568.5	584.5	591.1	593.5
% change	-3.3	1.8	0.7	3.7	2.8	1.1	0.4
Nondurable Manufacturing	376.5	381.4	382.3	382.7	385.4	386.9	389.2
% change	-0.7	1.3	0.2	0.1	0.7	0.4	0.6
<b>Services-Producing Industries</b>	4,101.2	4,169.6	4,256.9	4,363.3	4,481.2	4,517.1	4,558.2
% change	0.8	1.7	2.1	2.5	2.7	0.8	0.9
Wholesale Trade	346.0	338.4	340.3	349.0	365.2	373.6	375.5
% change	-2.5	-2.2	0.6	2.6	4.6	2.3	0.5
Retail Trade	889.9	906.1	935.6	952.3	986.2	986.2	990.1
% change	-0.3	1.8	3.3	1.8	3.6	0.0	0.4
Finance, Insurance, & Real Estate	378.4	382.1	387.5	395.3	389.2	394.0	397.9
% change	0.2	1.0	1.4	2.0	-1.6	1.2	1.0
Services	1,410.1	1,464.9	1,502.6	1,553.8	1,612.4	1,644.4	1,679.1
% change	3.2	3.9	2.6	3.4	3.8	2.0	2.1
Government	773.9	768.1	777.6	790.0	799.8	788.3	783.2
% change	0.4	-0.7	1.2	1.6	1.2	-1.4	-0.7

**Total retail sales are expected to grow 3% in 1997 and 2.3% in 1998, significantly higher than the 0.9% expansion in 1996.**

### REAL RETAIL SALES (millions of 1987 dollars)

	1992	1993	1994	1995	1996	1997	1998
<b>Total Retail Sales</b>	93,557	94,011	94,725	95,158	95,988	98,822	101,100
% change	-0.9	0.5	0.8	0.5	0.9	3.0	2.3
Durable Goods	33,792	36,276	38,274	37,846	38,156	39,293	40,194
% change	5.5	7.4	5.5	-1.1	0.8	3.0	2.3
Nondurable Goods	59,765	57,735	56,451	57,312	57,831	59,529	60,906
% change	-4.2	-3.4	-2.2	1.5	0.9	2.9	2.3

# Illinois Forecast Statistics

## REAL PERSONAL INCOME (millions of 1987 dollars)

	1992	1993	1994	1995	1996	1997	1998
<b>Total Personal Income</b>	253,606	258,473	263,152	271,874	277,613	287,412	295,727
% change	3.8	1.9	1.8	3.3	2.1	3.5	2.9
<b>Total Nonfarm Personal Income</b>	185,069	189,457	193,329	199,459	206,478	213,284	218,579
% change	3.8	2.4	2.0	3.2	3.5	3.3	2.5
<b>Goods-Producing Industries</b>	48,552	49,506	51,265	51,336	52,394	53,303	53,967
% change	1.3	2.0	3.6	0.1	2.1	1.7	1.2
Manufacturing	37,798	38,639	39,742	39,708	40,600	41,293	41,806
% change	2.3	2.2	2.9	-0.1	2.2	1.7	1.2
Durable Manufacturing	21,668	22,308	23,369	23,375	23,973	24,410	24,689
% change	0.3	3.0	4.8	0.0	2.6	1.8	1.1
Nondurable Manufacturing	16,130	16,331	16,373	16,334	16,627	16,883	17,117
% change	5.1	1.2	0.3	-0.2	1.8	1.5	1.4
<b>Service-Producing Industries</b>	35,654	139,051	141,112	147,133	154,084	159,980	164,612
% change	4.7	2.5	1.5	4.3	4.7	3.8	2.9
Wholesale Trade	14,781	14,506	14,595	15,174	16,310	17,567	18,129
% change	1.7	-1.9	0.6	4.0	7.5	7.7	3.2
Retail Trade	16,232	16,582	16,935	17,677	18,740	18,987	18,889
% change	2.4	2.2	2.1	4.4	6.0	1.3	-0.5
Finance, Insurance, & Real Estate	16,892	17,315	17,401	17,494	18,275	19,002	19,618
% change	10.7	2.5	0.5	0.5	4.5	4.0	3.2
Services	49,510	51,476	52,735	56,094	58,728	61,553	64,291
% change	5.7	4.0	2.4	6.4	4.7	4.8	4.4
Government	24,573	25,032	25,048	25,653	26,506	27,037	27,525
% change	3.1	1.9	0.1	2.4	3.3	2.0	1.8

**High growth in real gross state product is expected in 1997.**

## REAL GROSS STATE PRODUCT (in millions of 1987 dollars)

	1992	1993	1994	1995	1996	1997	1998
<b>Total Gross State Product</b>	295,537	294,584	303,718	314,671	316,700	334,124	341,997
% change	7.5	-0.3	3.1	3.6	0.6	5.5	2.4
<b>Goods-Producing Industries</b>	69,998	71,971	74,684	75,141	77,244	78,566	79,724
% change	1.7	2.8	3.8	0.6	2.8	1.7	1.5
Manufacturing	56,455	58,335	60,386	60,607	62,501	63,561	64,521
% change	2.7	3.3	3.5	0.4	3.1	1.7	1.5
Durable Manufacturing	28,065	28,864	30,281	29,677	30,705	31,021	31,285
% change	1.3	2.8	4.9	-2.0	3.5	1.0	0.9
Nondurable Manufacturing	28,390	29,471	30,104	30,931	31,796	32,540	33,235
% change	4.1	3.8	2.1	2.7	2.8	2.3	2.1
<b>Service-Producing Industries</b>	227,229	236,165	241,833	251,983	263,220	273,081	282,006
% change	4.5	3.9	2.4	4.2	4.5	3.7	3.3
Wholesale Trade	26,250	27,408	28,191	29,379	30,834	32,418	33,999
% change	5.1	4.4	2.9	4.2	5.0	5.1	4.9
Retail Trade	26,009	26,698	27,368	28,710	30,609	31,363	31,406
% change	2.4	2.6	2.5	4.9	6.6	2.5	0.1
Finance, Insurance, & Real Estate	52,999	55,044	56,017	57,224	58,785	60,312	61,809
% change	4.5	3.9	1.8	2.2	2.7	2.6	2.5
Services	64,040	67,378	69,814	74,333	78,427	82,634	86,808
% change	6.3	5.2	3.6	6.5	5.5	5.4	5.1
Government	27,313	27,899	27,949	28,517	29,342	29,936	30,450
% change	3.1	2.1	0.2	2.0	2.9	2.0	1.7

# Illinois State Revenue Update

By J. Fred Giertz and Robert W. Resek

## State revenues for the year will exceed the official beginning-of-the year predictions by about \$100 million.

ILLINOIS STATE REVENUES REMAIN STRONG THROUGH the first 11 months of fiscal 1996 (Table 1). The forecasts of the University of Illinois Institute of Government and Public Affairs (IGPA) suggest that state revenues for the year will exceed the official beginning-of-the-year predictions by about \$100 million. IGPA forecasts also predict that revenues will grow in the next fiscal year at a 2.7 percent rate, somewhat slower than the 3.6 percent pace recorded in FY1996. The IGPA forecast remains somewhat higher than that of the governor's Bureau of the Budget (BOB) and considerably above that of the General Assembly's Illinois Economic and Fiscal Commission (IEFC) (Table 2, following page).

The Illinois General Assembly passed the budget for the next fiscal year ahead of the constitutionally mandated May 31 deadline for the second straight year. The 1996 legislative session was uneventful on the tax front. No new major taxes were approved, and few spending initiatives were undertaken. Because of the favorable revenue picture, the General Assembly was able to increase spending above Governor Jim Edgar's budget recommendations while rejecting his request for an increase in the tax on riverboat casinos. Over the past several years, the state was burdened not only with paying current Medicaid expenses, but also with paying bills deferred from previous years. Therefore, in addition to new tax revenues in FY1997, increased funding for education and other state programs will also come from a seeming windfall, money used in previous years to reduce the Medicaid payment backlog.

In FY1998 (beginning July 1, 1997) the money that was used to pay deferred Medicaid payments will be part of the regular budget, no longer "found money" to be used for special purposes. **IBR**

**Table 1. FY1996 Illinois State Revenue Performance**

(July 1, 1995–May 1996, millions of current dollars)

Revenue Source	Receipts		Actual less Target
	Target	Actual	
Individual Income Tax	5,113	5,169	56
Corporate Income Tax	798	835	37
Sales Tax	4,478	4,400	-78
Public Utility Tax	691	777	86
Cigarette Tax	275	275	0
Liquor Tax	52	52	0
Inheritance Tax	52	52	0
Insurance Tax	147	134	-13
Corp. Franchise Tax	97	90	-7
Interest	111	123	12
Other Tax Sources	234	187	-47
<b>Total</b>	<b>12,151</b>	<b>12,208</b>	<b>57</b>
Transfers In			
Lottery	518	517	-1
Riverboat Gambling	186	187	1
Other Transfers	243	288	45
<b>Total State Sources</b>	<b>13,098</b>	<b>13,200</b>	<b>102</b>
Federal Aid	3,016	3,016	0
<b>Total Revenues*</b>	<b>16,114</b>	<b>16,216</b>	<b>102</b>

\*exclusive of short-term borrowing



J. Fred Giertz



Robert W. Resek

Both J. Fred Giertz and Robert W. Resek are professors of economics at the University of Illinois at Urbana-Champaign and members of the university's Institute of Government and Public Affairs.



**Table 2. Comparison of Forecasts of State Revenue (millions of current dollars)**

Revenue Source	FY96			FY97			FY98
	IGPA June	BOB Mar	IEFC June	IGPA May	BOB March	IEFC May	IGPA
Individual Income Tax	5,603	5,576	5,557	5,879	5,809	5,781	6,142
Corporate Income Tax	970	1,017	963	1,000	1,088	930	1,046
Sales Tax	4,800	4,828	4,825	5,075	5,020	4,990	5,343
Public Utility Tax	835	815	820	800	795	785	800
Cigarette Tax	300	300	300	300	300	300	300
Liquor Tax	57	57	56	60	56	58	60
Inheritance Tax	174	180	172	182	190	177	191
Insurance Tax	158	150	160	162	160	160	174
Corporate Franchise Tax	103	107	103	109	114	105	112
Interest	131	121	124	125	120	105	130
Other Tax Sources	279	279	266	293	282	268	300
<b>Total</b>	<b>13,446</b>	<b>13,430</b>	<b>13,346</b>	<b>13,985</b>	<b>13,934</b>	<b>13,659</b>	<b>14,598</b>
Transfers In							
Lottery	605	595	600	600	595	590	591
Riverboat Gambling	215	205	210	225	207	215	226
Other Transfers	325	325	319	315	315	300	300
<b>Total State Sources</b>	<b>14,591</b>	<b>14,555</b>	<b>14,475</b>	<b>15,125</b>	<b>15,051</b>	<b>14,764</b>	<b>15,715</b>
Federal Aid	3,335	3,335	3,335	3,291	3,291	3,291	3,300
<b>Total Revenue Sources</b>	<b>17,926</b>	<b>17,890</b>	<b>17,810</b>	<b>18,416</b>	<b>18,342</b>	<b>18,055</b>	<b>19,015</b>

*The favorable revenue picture allowed the General Assembly to increase spending above the governor's recommendations.*

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Fall 1996



*A Chicago Dome: Economic Development or Empty Promise*



*A New Way to Finance Urban Infrastructure*

*Venture Capital, More Than Money*

*Illinois Economic Forecast*

*Illinois State Revenue Update*

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# From the Editor



Richard J. Arnould

**W**HEN I WROTE IN THIS COLUMN FOR THE first time last spring, I had no idea that my tenure with the *Illinois Business Review* would be so short—but life is full of surprises. Recently I was tapped to take over the leadership of the Department of Economics here at the University of Illinois at Urbana-Champaign. And so this will be my next to last column in this space—I will serve as guest editor of the 1997 Illinois Economic Outlook Issue. I have enjoyed the challenge of developing new ways for this publication to bring to our readers the expertise of some of the talented researchers in the College of Commerce and working with the staff, fellow faculty members, and our research assistants in publishing the *Illinois Business Review*.

Next, I want to share with you the results of the reader survey conducted in the spring issue. Those who responded mostly found the *Illinois Business Review* interesting, easy to understand, useful, and reliable. A large proportion of respondents reported that they use the information gained from reading the *IBR* in their business. Fewer, but a majority, use the forecast articles and statistics; revenue statistics were less widely used. Almost everyone liked the addition of summaries at the beginning of the articles. Less than half of those responding said that they would use a World Wide Web version of the publication.

The upcoming Illinois Economic Outlook issue of the *IBR* (January 1997) will be even more broadly based than past Outlooks. In addition to articles on agriculture (done by a panel of University agricultural economists), the state of the state, income

trends, and others, we also will have short pieces by active practitioners in banking, financial services, and manufacturing who will share their views of their industries and their perceptions of the directions their industries may be heading.

In the current issue, our lead article deals with the proposed construction of a new domed stadium for the Chicago Bears. Carole Amidon investigates the experiences of some other cities who have built domed stadiums and tries to assess the current Chicago plans in terms of financing issues and the project's potential as an economic development tool.

Finance Professor Jan K. Brueckner discusses the use of urban "impact fees" to help local government bodies deal with the increased need for services produced by urban growth. He examines the spread of such fees and at who benefits when they are introduced.

Another article takes a new look at venture capital, noting that the investors often contribute much more than money to the companies they fund. The author, A. Gledson Carvalho, discovered that through syndication of investments, venture capitalists have formed informal networks for exchange of information about management and management teams.

We continue to thank you for your input and comments about how we can make the *IBR* more useful to you.

Thank you,

Richard J. Arnould



# ILLINOIS BUSINESS Review

Bureau of Economic and Business Research  
College of Commerce and Business Administration  
University of Illinois at Urbana-Champaign

Fall 1996 ♦ Volume 53 ♦ Number 3

## A Chicago Dome: Economic Development or Empty Promise

Mayor Daley, Governor Edgar, the Bear management and the general public have been arguing for months over various plans for a new or renovated facility for the Chicago Bears football franchise. What are the relative benefits and disadvantages of the plans and the experiences of other cities?

By Carole M. Amidon ..... Page 4

## A New Way to Finance Urban Infrastructure

Impact fees that require developers and, ultimately, new homeowners to pay for the costs of the infrastructure required by new neighborhoods offer tax relief for established homeowners and more rational urban growth.

By Jan K. Brueckner ..... Page 8

## Venture Capital, More Than Money

Venture capitalists who provide financing to develop new, high-risk companies can also provide nonfinancial benefits such as putting together an effective management team and developing the organizational structure of the firm.

By A. Gledson Carvalho ..... Page 11

## Illinois Economic Forecast

Illinois personal income will remain strong through 1998, indicating the health of the state's economy.

By Harvey B. Westbrook, Jr. .... Page 14

## 1996 Illinois Statistical Abstract

Everything you ever wanted to know about Illinois in one easy-to-use volume ..... Page 17

## Illinois State Revenue Update

Revenue growth in fiscal 1997 promises to continue, but at a slower pace than last year.

By J. Fred Giertz and Robert W. Resek ..... Page 18

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**Cover Photo:** Soldier Field, Chicago.

**Photo:** Courtesy of the Chicago Bears.

# ***A Chicago Dome: Economic Development or Empty Promise?***

By Carole M. Amidon

**Mayor Daley, Governor Edgar, the Bears management, and the public have been arguing for months over various plans for a new or renovated facility for the Chicago Bears football franchise. What are the relative benefits and disadvantages of the plans and the experiences of other cities?**

**W**HETHER OR NOT TO BUILD A NEW DOMED stadium for the Chicago Bears football franchise has been one of many contentious issues for the state and the city of Chicago over the past year. Political leaders were unable to agree on a plan to build a new facility for the Bears earlier this year even though the project would create new tourism opportunities, construction jobs, and, it is hoped, be a spark to the Bears fans and team. Opposing interests could never agree on how and by whom the funding would be arranged. Team owner Mike McCaskey contends that Soldier Field, at 72 years old, is in need of renovations or replacement because of aesthetic, structural, and revenue problems. McCaskey has intimated that he will not renew his lease after it expires in 1999, and he has courted offers to relocate the Chicago Bears' franchise, most notably from Gary, Indiana.

Building multi-million dollar domes and stadiums is a recent trend in large U. S. cities with 24 of the 60 largest cities having built or made plans to build such a complex. Often, the reasons cited for such massive undertakings are economic development

and the prestige that accompanies the acquisition of a professional sports team. Chicago is slightly different in that it does not need to develop its prestige as a great American city; but in order to maintain its position, it cannot risk losing a large, well-followed franchise such as the Bears to a smaller city less encumbered with political wrangling. The issues involved in putting together a stadium deal include whether to rehabilitate Soldier Field or to build a multipurpose dome, who is to finance the construction, and how to divide the profits from the venture.

When Chicago Mayor Richard M. Daley proposed spending \$171 million to improve and update Soldier Field, the Bears' McCaskey quickly dismissed the idea. Generally, the stadium is considered too old and out of date to even consider rehabilitation since the addition of luxury boxes and such facilities as in-house restaurants and bars would be extremely difficult. Thus, McCaskey would rather have a large new facility to accommodate all the modern luxuries common to newer stadiums.

Many cities have favored the multipurpose dome to spread the cost of the facilities over many



Carole M. Amidon

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sporting and other events and as a way of establishing facilities for football, baseball, and soccer as well as other such large-crowd events such as concerts, conferences, and trade shows. Illinois Governor Jim Edgar has proposed a multipurpose facility as a solution to McCaskey's requests. A multipurpose dome would not benefit any major league sports at the moment since Chicago already has facilities for all other major league sports in the new Comiskey Park, historic Wrigley Field, and the new United Center. The United Center was also built as a multipurpose facility and has been used for such large events as the Democratic National Convention. Therefore, a facility similar to the one proposed by the governor already exists. Analysis of the demand for two such facilities would answer the question of actual need to build another large dome but Edgar seems to hope this is a case of if you build it, they will come.

## The Edgar Proposal

"McDome," as it has been dubbed by the Chicago media, would be attached to McCormick Place. The governor's latest financing plan, rejected by Mayor Daley, called for a \$465 million project funded by \$175 million from the Bears organization, \$185 million from tourism taxes, \$25 million each from the state and city coffers for road improvements, \$5 million from McCormick Place and Navy Pier, and at least \$50 million for a parking garage to be financed by some sort of debt instrument. The proposed dome would have 72,000 seats, an increase of 5,050 seats over Soldier Field, with skyboxes and executive club seating to increase the revenue garnered from ticket sales. Some seats would also require the purchase of a seat license, which allows the purchasers the right to buy season tickets for the seats. Thus, the Edgar plan is asking the people of Chicago and Illinois to fund \$290 million of the total dome project, much more than half the cost. Then the revenues would accrue, not to the taxpayers or general citizenry, but to the Bears organization. This is truly a case of double dipping by the Bears when the taxpayers are first asked to finance the construction and then must pay for the privilege of seeing the Bears in the dome.

The perceived necessity for expensive luxury boxes and services for the Bears fans follows the trend of recent stadium projects, such as the Georgia Dome, where the revenue of a franchise no longer depends on Joe Six-Pack fan but instead on large corporate sponsors willing to rent costly, but well-appointed seating for a season, and on a government willing to guarantee a certain level of income to the franchise. As a result, the price of a night at the ball park has

skyrocketed in recent years. Without the support of the average fan, though, it may be difficult to finance a team through ticket sales and television revenues. The demand for television broadcasts may well decrease if Bears policy alienates the general public.

## The Daley Proposal

Mayor Daley made a surprise proposal on September 13, 1996, when he announced a compromise plan to build a plastic retractable dome over Soldier Field. The \$395 million proposal would allow the facility to be used for multiple purposes but retains the grass field for football. The proposal would add 6,000 seats, including new skyboxes, by building nine rows up from the upper deck. Construction would take place over the next three off-seasons and not disrupt any Bears games.

Daley contends that the plan will help guarantee \$30 million in unshared revenue for the Bears franchise from restaurant and billboard advertising sales. Currently, the Bears are estimated to receive \$15 to \$20 million overall with only \$6 million from unshared revenue, far below the NFL's highest earnings, \$60 million by the Dallas Cowboys. Neither McCaskey nor Edgar were impressed by the offer and neither sent any representatives immediately to discuss the plans with Daley's stadium planners and architects.

Soldier Field, the Bears' present home, was built in 1924.



Photo: Courtesy of the Chicago Bears

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***Twenty-four of the sixty largest U.S. cities have built or made plans to build a super sports complex.***

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## The Atlanta Experience

McCaskey is not the only owner to have asked taxpayers to finance a private sports corporation. A situation similar to the Bears has already been played out in Atlanta, Georgia. The Georgia Dome project began when Rankin W. Smith, Jr., owner of the Atlanta Falcons, threatened to move the team to Jacksonville, Florida, unless a deal to guarantee income and a new stadium was worked out with the Georgia and Atlanta governments. The original plan called for a \$158 million dome with 70 percent financed by private sources and 30 percent from the public coffers. Banks were unwilling to make a \$110 million loan to be serviced by ten home football games per year with a demonstrated weak demand

for presold skyboxes. Since the private market was unwilling to take the risk on the investment, Georgia Governor Joe Frank Harris intervened and proposed an equal sharing of the costs, with additional financing from a tourism tax on Fulton County hotels and motels. Atlanta Mayor Andrew Young and the Georgia World Congress Center Authority, overseers of the attached conference facilities, were unwilling to give up the financing they received from the tourism tax in order to pay off bonds issued to finance the dome. Eventually, the tourism tax was increased in order to accommodate the financing of both entities.

## Financing Issues

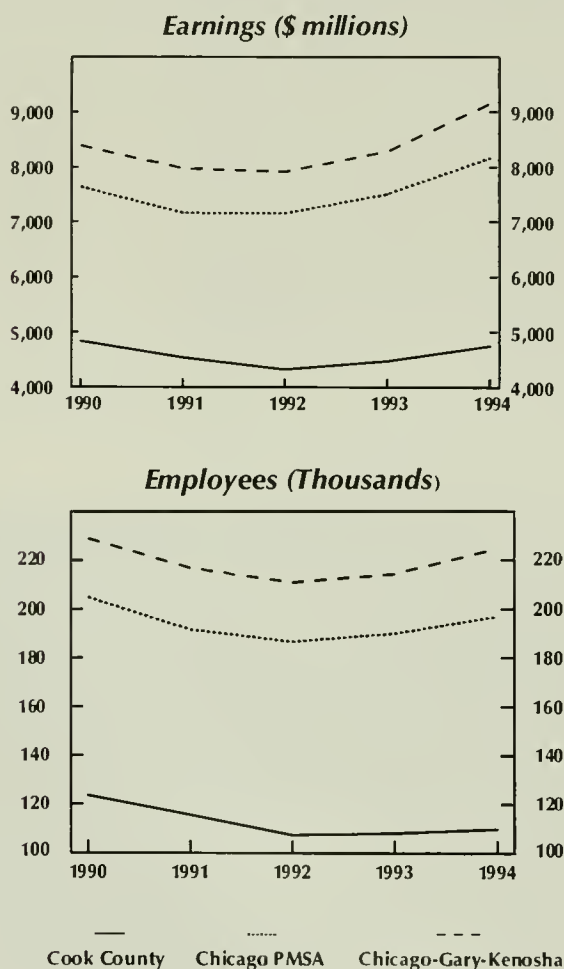
In the cases of both the Atlanta and Chicago domes, the taxpayers are being asked to pay for a project benefiting a single corporation. The Atlanta Falcons were unable to presell their seats, demonstrating that they were not a safe investment, and the government agreed to guarantee the income of a large corporation that had already shown its inability to compete in the market place. In the end, tax free bonds were issued to cover the costs, and the taxpayers were hit again since any interest income made by the bond investors will not be taxed.

Such financing plans are very common across the country where loopholes in the tax codes allow sport franchise owners to spread the cost of facilities over a very wide taxpayer base. Prior to 1986, financing for many stadiums was done through low-interest private revenue bonds, until legislation sponsored by Sen. Daniel Patrick Moynihan, D-New York was passed disallowing the use of these bonds for stadium financing. Owners then discovered another financing path through general purpose tax-free bonds, issued by a city or state, that spread the cost over many taxpayers. Moynihan also recently proposed that the use of general purpose bonds be disallowed, retroactive to June 14, 1996; but he quickly retreated as officials from Nashville, Tennessee, complained that it would threaten their issuance of \$60 million in bonds to attract the Houston Oilers football franchise. House Speaker Newt Gingrich, R-GA, promised that the bill would not make it through the House of Representatives and assured the Nashville officials that their economic development plan would not be jeopardized.

A private legal challenge also confronted the funding proposal of the Georgia Dome. The use of the tourism tax on Fulton County hotels and motels to pay off construction bonds for the Georgia Dome, general government services, and fostering of tourism in Atlanta was challenged by a group of Fulton County hotel and motel owners, represented by

### Construction Trends in the Greater Chicago Area

More construction jobs and increased demand for materials would benefit people directly related to the project and should filter down to the surrounding area.



Chicago PMSA includes Cook, DeKalb, DuPage, Grundy, Kane, Kendall, Lake, McHenry, and Will Counties, IL.

Chicago-Gary-Kenosha CMSA includes the Chicago PMSA, plus Kankakee County, IL; Lake and Porter Counties, IN; and Kenosha County, WI.

Nickolas P. Chivilis. Chivilis contended the tax unfairly singled out Fulton County hotel and motel guests to pay for development in Atlanta. The suit was struck down since Fulton County should benefit from increased tourism in downtown Atlanta even though the site of the stadium is actually outside the Fulton County lines. This same issue could arise in Chicago if the Collar counties are assessed a similar tourism tax to pay for a stadium in Cook County, as suggested by Mayor Daley. Daley put forward the idea of taxing the collar counties because many Bears fans live in the surrounding counties outside of Cook County and the Chicago city limits and, therefore, may be avoiding some of the payment for a stadium that they use and enjoy. A way of avoiding city/suburbs conflict would be to tax the entire state rather than using tourism taxes in specific places to fund the stadium. While this would spread the cost of the new dome over a very large group of people, no doubt a whole new set of conflicts would arise.

## Development Issues

New stadiums as economic development projects within a city is a common theme in justifying the use of taxpayer money and tax-free bond financing. In their May 1996 report, the Congressional Research Service compiled an example of this economic development in Baltimore, Maryland. Attracting the Cleveland Browns football team to Baltimore cost \$127,000 per job created, vastly exceeding the \$6,250 price of a job created by Maryland's economic development fund. Furthermore, the Congressional Research Service concludes that "Almost all stadium spending is spending that would have been made on other activities within the United States"; so there is no real development in such projects.

Bond financing by cities and states has another negative effect by potentially crowding out other borrowing the government might need to do. In fiscal year 1992, Illinois began using short-term borrowing as a means of raising revenue, with an initial borrowing of \$685 million. Thus, even before the notion of using \$240 million in taxpayer revenue and \$50 million in borrowed funds to finance the stadium, the state was already borrowing to cover revenue shortfalls. Issuing bonds for the stadium could raise interest rates on subsequent state borrowing or even push the state toward its debt limit. Both instances could increase tax burdens and decrease government services in the future.

Building a new stadium could create some positive effects. An injection of cash into the Chicago economy in more construction jobs and increased demand for materials would benefit people directly

related to the project and should filter down to the surrounding area. Construction employment and earnings fell in the early 1990s in Chicago and Cook, DeKalb, Du Page, Grundy, Kane, Kendall, Lake, McHenry, Will, and Kankakee Counties, Illinois; Lake and Porter Counties in

Indiana; and Kenosha County, Wisconsin. (See Charts) By 1994 construction earnings had exceeded the 1990 figure and construction employment has nearly returned to prerecession levels. Cook County has been the slowest area to recover in both construction earnings and employment and may benefit the most from increased governmental spending in construction. Both the earnings and employment figures show that the general Chicago area could also profit from an injection of new money into the construction industry through the dome project.

At the completion of the dome project, more tourists could be attracted and create more demand for the city's service industries such as restaurants and hotels. Some of this

positive effect of tourism could be lessened, however, by building the stadium with in-house restaurants and bars, diverting tourists from surrounding businesses and making more competition rather than developing the surrounding

economy. The Georgia Dome did have a positive effect on the greater Atlanta area when the city won the right to host the 1996 Summer Olympic with its corresponding influx of tourists to increase economic activity. However, there is as yet no solid evidence that the money spent to finance the Georgia Dome project actually produced benefits in excess of its cost.

The Chicago dome proposal appears to have as many potential problems as benefits for the area. The Congressional Research Services has determined that increasing spending on sports domes simply decreases spending in other areas and results in little or no net gain for the economy. The major short-run beneficiaries in Chicago would be the construction industry and materials suppliers, while in the long run, the surrounding area might experience some increase in revenues from tourism. **IBR**

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***Attracting the Cleveland Browns football team to Baltimore cost \$127,000 per job created.***

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***The Chicago dome proposal has as many potential problems as benefits.***

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# A New Way to Finance Urban Infrastructure

By Jan K. Brueckner

**Impact fees that require developers and, ultimately, new homeowners to pay for the costs of the infrastructure required by new neighborhoods offer tax relief for established homeowners and more rational urban growth.**

**G**OVERNMENTAL UNITS THAT PROVIDE SERVICES to their residents need both infrastructure and current services such as labor. For example, educating a city's children requires constructing school buildings and playing fields as well as hiring teachers and purchasing books and other supplies. When the population is growing and the citizens wish to maintain the level of public services, both infrastructure and current services must grow as well. The city must decide who should pay the increasing costs of both. In the case of current services, the answer is clear: the new urban residents can pay the additional expenses. Since the older residents make similar payments, everyone pays a share.

Because most infrastructure costs are one-time expenses, it is more difficult to devise a fair way to finance them. One method shares the cost of the increased infrastructure among *all* the city's residents, old and new. In this case, the original residents help pay for the costs of schools in the new neighborhoods, which their children do not attend. This burden is offset by a previous benefit, however, since the original residents' schools were also partially financed by *their* predecessors. And the newcomers benefit from the help of older residents in

paying for their new schools but will be obligated to share the cost of future construction.

As an alternative, each group of new residents can be charged for the cost of the additional infrastructure required by their presence in the city. For example, the residents of a new neighborhood can pay for the cost of constructing their school. This involves a large one-time outlay for the new residents while exempting the original residents. However, the original residents would have already made a similar payment for construction of their own neighborhood schools.

Historically, U. S. cities have relied on the cost-sharing approach to finance infrastructure. But rather than paying up front for its cost, cities typically raised the required funds through the sale of bonds. Then all existing residents shared the burden of interest payments on the previously built infrastructure.

In the last several decades cities have increasingly asked new residents to pay for the cost of new infrastructure. Such payments come from the real estate developers who build the new neighborhoods. The developer often builds the needed new infrastructure, such as streets, water mains, sewers, parks, and even schools, as a condition of opening a new



Jan K. Brueckner

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development. While this "in-kind" provision can work when the infrastructure is within the development itself, there may be a need for ex-

pansion somewhere else in the city, such as construction of a larger police headquarters. In this case, a cash payment, known as an "impact fee," is charged to the developer as a condition of undertaking the project.

The 1993 book *Regulation for Revenue*, by Alan Altshuler and Jose Gomez-Ibanez, provides a helpful summary of trends in infrastructure charges. Only 10 percent of localities levied these charges before 1960, but by the mid 1980s, 90 percent did so. Prior to 1960, most cities required in-kind payments. By the mid 1980s, however, impact fees were used along with in-kind levies in around 60 percent of localities. Although impact fees are sometimes levied according to formula, in many cases negotiations between developers and local government determine the levy. However they are determined, the size of the levies has increased with their use. In Southern California the level of impact fees rose by over 500 percent between 1975 and 1983, while Florida experienced a tripling of impact fees between 1985 and 1991. Altshuler and Gomez-Ibanez believe that infrastructure charges account for 5 to 10 percent of construction costs in fast-growing communities. They cite a figure of from \$5-\$7 per square foot for both residential and commercial development. This translates into a cost of around \$12,000 for a typical 2,000 square foot house.

## The Effects of Impact Fees

Many commentators claim that impact fees are a response to excessive urban growth. They argue that when developers are forced to pay the full cost of infrastructure, development is less attractive, and urban growth is slowed. Others argue that impact fees are adopted because they benefit established homeowners, who enjoy a reduction in property taxes. Another claim is that the fees raise social welfare because they lead to better decisions about development.

Unfortunately, the economic analysis underlying such claims is incomplete. In recent research I have attempted to provide a better analysis, addressing the following questions:

- ◆ What is the effect of impact fees on urban growth?
- ◆ Who gains when impact fees are adopted?
- ◆ Is the use of such fees socially desirable?

# Infrastructure charges account for 5 to 10% of construction costs in fast-growing communities.

## Impact Fees and Urban Growth

A key element in determining the effect of impact fees on urban growth is the notion of optimum city size, viewed from the perspective of infrastructure costs. To determine the optimum size of a city, one first computes the cost of the infrastructure needed to provide a fixed level of services to cities of various populations. It is possible, for example, to determine the cost of a road network capable of providing an acceptable traffic speed, and this calculation can be repeated for different population levels. The network must grow (and costs increase) as population rises in order to prevent unacceptable road congestion. Dividing the total cost of the infrastructure by the population of the area gives a per capita cost at each population size. The optimum size for a city is where per capita infrastructure costs are as small as possible.

The effect of changing to an impact-fee system of infrastructure finance depends on whether the population of the city is above or below the optimum at the time. If the fees are imposed when the city is above the optimum size, growth stops. The reason is that the annual payment for infrastructure now exceeds the level under the cost-sharing method, so that housing development becomes more expensive, and developers have less incentive to build. After a period of no new construction, growth resumes, but the population is lower at each future date than it would have been without impact fees. Therefore, cities experiencing excessive growth can deal with the problem by introducing impact fees.

## Who Gains?

How does the change in the funding of new infrastructure affect the property values of homeowners? If the city has grown beyond the optimum population, then the switch to impact fees raises the value of all existing houses. So all homeowners gain. The reason is that when the city exceeds the optimum population, per capita infrastructure costs rise



Photo: Michael Warren.

Communities are seeking new ways to pay the costs of providing services to new residents.

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## ***Because the tax burden on homeowners falls, property values rise.***

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over time when they are financed by the cost-sharing method. The shift to impact fees stops the increase by transferring the costs to new development, so that infrastructure payments for established homeowners are lower than they would have been. Because the tax burden on homeowners falls, property values rise.

Therefore, after a city has undergone substantial growth, established homeowners have a strong financial incentive to lobby for the adoption of impact fees. This political force may account for the spread of the impact fee method. Several studies confirm the financial gains of homeowners by showing that the values of existing houses increased in several cities (one in Florida and another in Colorado) after the adoption of impact fees.

### ***Social Benefits***

The impact-fee and cost-sharing methods promote different patterns of population growth for a city. Impact-fee financing of new infrastructure is socially desirable if the resulting pattern of growth is "superior" to the one produced by the cost-sharing method.

Superiority can be judged according to the aggregate value of property in the region, and the aggregate value is greatest when the impact-fee method is used. The reason is that when a developer is forced to pay the full cost of infrastructure generated by his development, he makes a development decision that correctly balances social costs and benefits. As a result, development of each piece of land occurs at the "right" moment from society's point of view, leading to the optimum pattern of population growth for the city. By contrast, if the developer pays only a share of the infrastructure costs (as under the cost-sharing method), then the full social cost of development is not taken into account. As a result, land can be developed at the "wrong" time, and population growth is not optimum. This suggests that the spread of impact fees is in society's interest. It will lead to a more rational pattern of population growth in our urban areas.

### ***Administrative Issues***

Although it is easy enough to talk about impact fees in the abstract, the implementation of such a system is quite complex. Consider the case of transportation impact fees, which are currently levied by

a number of jurisdictions in the Chicago suburbs. If a developer proposes a new subdivision, the jurisdiction must compute an impact fee per house to be spent to offset the subdivision's impact on the county road network.

The traffic impact is computed by first predicting the increases in traffic levels on the jurisdiction's roads due to the presence of the subdivision, and then computing the cost of the required capacity expansion for each road. The costs for all affected roads are added up and the sum is divided by the number of new houses in the subdivision to produce the transportation impact fee per house.

While a similar method could be used to calculate the impact on some other kinds of infrastructure, the actual calculations carried out by local governments often involve a large subjective element (guesswork and imprecision). As a result, there

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## ***Implementation of an impact fee system is quite complex.***

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has been much litigation over the years, with developers contesting the fees they were charged. The courts have repeatedly stressed the need for a rational link between fees and probable impact, and several standards have emerged in different states. A recent Supreme Court decision has superseded all these with a new standard of "rough proportionality" between fees and impact.

The complexity of the impact fee issue is likely to continue to generate legal challenges. Given the political popularity of such fees, however, they are destined to be used even more widely in the future, and analysis seems to suggest that this will be good for society. **IBR**

This article is revised from an earlier one, "Impact Fees: A New Method of Financing Urban Infrastructure," in *Policy Forum*, vol. 9, no. 3.

# Venture Capital, More Than Money

By A. Gledson Carvalho

**Venture capitalists who provide financing to develop new, high-risk companies can also provide nonfinancial benefits such as putting together effective management teams and developing the organizational structure of the firm.**

**A** LITTLE-KNOWN AND NOT FULLY UNDERSTOOD by-product of venture capital financing of new businesses is the transfer of information among coinvestors about the abilities and experience of corporate managers.

Venture capital (also known as private equity) is one of the business sectors where the cooperation among competitors makes the whole sector more efficient and each competitor individually stronger. In the course of their activities, venture capitalists acquire valuable information. But sometimes giving that information to a rival is the best use that can be made of it.

Private equity has been the source of funding for many successful companies, among them Apple Computer, Microsoft, Intel, Federal Express, Hybritech, and Teledyne. Nonetheless, the big successes constitute a small fraction of the investments made. A considerable number of cases result in moderate success and some losses. A not insignificant number of cases result in the loss of the whole sum invested (see sidebar, pg. 13). This is because venture capital funds high risk firms, most of which are not candidates for other sources of funding. This raises the question of whether private equity is simply a form of financial contract designed to remunerate investors for the high risk they assume or a

superior form of finance that really adds value to the firms it funds. I have been exploring the idea that venture capital adds value because it allows investors to transfer valuable information acquired in previous investments to the new projects.

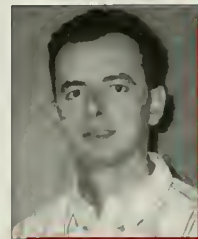
Part of the value of a firm includes assets that are not transferable. They include the institutional arrangements made within the firm, its organizational culture, knowledge of the abilities and experience that some employees can bring to the job, and so on—what, for lack of a better term, I call organizational capital. I argue that a mature private equity industry provides venture capitalists with the opportunity to transfer organizational capital among firms. One of the mechanisms by which this occurs is an informal network of venture capitalists that involves locating and relocating managers. This is a unique feature of venture-capital financing and constitutes a source of value-added to the firms involved.

Venture capitalists receive money from investors, and with it they buy shares of private companies

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***Big successes constitute a small fraction of the investments made by venture capitalists.***

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A. Gledson Carvalho

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Software giant Microsoft is one of venture capital's success stories.

with the potential for fast growth (they look for firms that might eventually be traded publicly). Usually, the investment is made in a way that gives venture capitalists control over important decisions such as replacing managers and liquidating the firm. The ultimate goal of such investors is to make large profits by taking the firm public through an initial public offering. Nonetheless, more often than not, their investment ends when the firm merges with a larger corporation or is simply liquidated.

In either case, senior managers such as CEOs and CFOs find themselves in vulnerable situations. Either they are unemployed or have lost their autonomy. Therefore, in most cases, they have limited viability in the firm. They take the risk because they receive stock options, which can be a big prize in the event that the enterprise is successful.

Since firms funded with venture capital are very risky, their success depends largely on having a management team able to lead the firm through an ocean of turbulence and uncertainties. This gives the managers an informational advantage over the providers of capital. In some cases, this difference in information can be harmful to the investors. Consider, for instance, the situation in which the chance of success is small and the best

thing for the investor would be to liquidate the firm. Managers would rather withhold such information and keep the investor injecting money into the firm. This problem makes project governance extremely important.

One of the mechanisms developed to deal with this problem is intense monitoring combined with the staging of the investment. The project is divided into stages, and the venture capitalists invest only the capital necessary to take the firm from one stage to the next. They monitor the firm closely, and at every round of financing they decide whether or not to continue funding the firm.

Besides monitoring, venture capitalists frequently become involved in the operation of the firm. They help to develop business strategies, structure deals with suppliers and customers, act as the confidants of managers, recruit key employees, replace manag-

ers when necessary, and so on. Such close involvement provides venture capitalists with privileged information about the quality of the managers of the companies they fund.

Venture capitalists frequently syndicate investments so that an investment is split among a group of investors (coinvestment). By syndicating, venture capitalists improve the screening of an investment (they feel more confident in funding a firm if they can convince others to invest in it as well), achieve better monitoring, guarantee sources of funds to a specific project, and diversify their portfolio (instead of wholly funding a few enterprises, they partially finance many). Syndication is also important because it creates strong bonds among venture capitalists and allows reliable information to flow among them.

The characteristics of private equity give venture capitalists the necessary conditions to transfer organizational capital from one firm to another. First, they take advantage of the knowledge they acquire

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***Since firms funded with venture capital are very risky, success depends largely on management's ability to lead through an ocean of turbulence and uncertainties.***

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## Venture capitalists who fund high-risk firms take suggestions and recommend managers more intensively.

about the management team of the companies they fund, trying to keep the good managers by rehiring them to manage other firms in their portfolio when they leave an investment. Second, because venture capitalists develop skills in forming management teams and timing the development of the companies as organizations (for example, when is the right time to hire a professional CEO or CFO). This constitutes a source of value added, since a firm funded with venture capital on average will have a management team more suitable to its needs than it otherwise would.

Knowing of a skillful manager looking for a position can be useful if the venture capitalist's portfolio includes a firm that needs such a manager. If that is not the case, the best thing to do is to refer the manager to someone in need of the manager. In this case, the venture capitalist has a role in certifying the qualifications of a manager (something that would be impossible in other types of financing). This creates an intense exchange of information among venture capitalists, a real network involved in locating and relocating managers.

To study this network, I conducted a survey answered by more than 150 venture capitalists all over the United States. Some of the preliminary results confirm the existence of the network: 77 percent of the venture capitalists believe they operate in informal networks involved in locating and relocating managers. When asked if it is common for them to suggest likely managers to other venture capitalists, 56 percent agree; and 62 percent say it is common for them to act on such suggestions when hiring top managers.

As mentioned earlier, investment syndication plays an important role in broadening the network. In field interviews, most of the venture capitalists affirm they would suggest managers only to coinvestors. This seems to be a consequence of how much they value the information they obtain about managers.

Some of them even say that they would suggest managers to another venture capitalist *only* if they had a stake in the firm that needs the manager. They say they would rather keep the good managers working in their own portfolio. This

attitude is not very widespread because few venture capitalists make enough deals to be able to match the availability of managers with openings.

Another preliminary finding suggests that networking is one of the ways venture capitalists use to control risk in their investments. Venture capitalists who fund high-risk firms take suggestions and recommend managers to other venture capitalists more intensively than do others.

So far, very little is known about the characteristics of the network. Nonetheless, it seems to be an important element in explaining how venture capital adds value and, consequently, in understanding why it has been successful in such an extremely risky environment. **IBR**

### Investment and Ownership of Some Venture Capital-Backed Firms

In the following listing you can see how several now large corporations benefited from a series of infusions of venture capital until they were ready to go public. Notice that the hugely successful Federal Express was not a particularly profitable investment for venture capitalists, with the price per share at the initial public offering far less than that at the time of their first round of investment.

Company	Investor	Amount Raised (\$ thousands)	Date	% ownership acquired	Price per share (\$)
Apple Computer	Founders	1	March '77	100.0	0
	Founders	115	Nov. '77	38.6	0.01
	Venture 1	518	Jan. '78	16.9	0.09
	Founders	426	July '78	12.7	0.09
	Venture 2	704	Sept. '78	6.3	0.28
	Venture 3	2,331	Dec. '80	5.5	0.97
	IPO	101,200	Dec. '80	8.5	22.00
Federal Express	Founders	4,745	Jan. '72	100.0	47.45
	Venture 1	12,250	Sept. '73	37.5	204.17
	Venture 2	6,500	March '74	84.5	7.34
	Venture 3	3,876	Sept. '74	85.7	0.63
	IPO	10,890	April '78	31.8	6.00
Staples	Founders/ Venture 1	4,425	Jan. '86	100.0	2.20
	Venture 2	13,927	Jan. '87	54.5	6.30
	Venture 3	13,597	Dec. '87	27.8	8.70
	Venture 4	2,800	Sept. '88	4.5	10.50
	IPO	61,750	April '89	35.6	19.00

IPO, initial public offering; Venture 1, 2, etc. refers to the first, second round of funding from venture capitalists.

Source: William A. Sahlman, "The Structure and Governance of Venture-Capital Organizations," *Journal of Financial Economics*, Volume 27 (1990), pp. 473-521.



# Illinois Economic Forecast

By Harvey B. Westbrook, Jr.

## Illinois personal income will remain strong through 1998, indicating the health of the state's economy as a whole.

**T**HE ILLINOIS ECONOMETRIC MODEL (IEM) projects strong growth in real personal income for Illinois through 1998.<sup>1</sup> Personal income will increase by 2.6 percent in 1996, 3.3 percent in 1997, and 2.5 percent in 1998. The 1998 growth will be slightly lower than was projected in the second quarter of 1996 due to lower national forecasts for the goods-producing sector of the economy. Real personal income in the Illinois goods-producing sector is expected to expand by 2.4 percent in 1996, 1.4 percent in 1997, and 0.8 percent in 1998. Much of the reduced growth in Illinois real personal income in this sector is offset by robust expansion in services-producing industries, which are expected to increase by 4.3 percent in 1996, 3.8 percent in 1997, and 2.8 percent in 1998. Much of the growth in this sector is driven by the services subsector (including such services as consulting and healthcare), which is expected to grow by 5.4 percent in 1996, 5.2 percent in 1997, and 4.1 percent in 1998. While strong growth is anticipated in the services-producing subsector, the expected increases in total real personal income indicates the health of the state's economy as a whole.

Total nonfarm employment is expected to expand 2.4 percent in 1996, 0.7 percent in 1997, and 0.9 percent in 1998. This projection is similar to those made last quarter. A significant portion of statewide employment growth will be in services. In

particular, the services subsector can expect increases of 4.2 percent in 1996, 2.0 percent in 1997, and 2.1 percent in 1998, continuing to be the fastest growing subsector of the Illinois economy. Government employment is expected to expand by a modest 1.5 percent in 1996 and to decrease by 2 percent in 1997 and 1 percent in 1998. The decrease is similar to the projections for government employment in the past few quarters.

Retail sales are anticipated to follow the same trends as the other measures of the economy. Strong growth is expected in retail sales in both 1997 and 1998, after relatively slow growth in 1996. Total retail sales are expected to increase by 2.7 percent in 1997 and 2.8 percent in 1998, significantly more than the 0.8 percent growth expected in 1996. The strength in total retail sales can be attributed to the robust projected expansion in the sales of nondurable goods (see table, pg. 16), expected to grow 0.8 percent in 1996 followed by 3.4 percent in 1997 and 2.5 percent in 1998. The slower rate of expansion for 1998 will follow the expected moderation of growth in retail sales nationwide. DRI/McGraw-Hill (a national econometric forecasting service) suggests that increased consumer spending will come at the expense of the continued low national savings rate.

<sup>1</sup>Note that real personal income, total retail sales, and total gross state product are reported in terms of 1992 dollars following the convention of the economic data used to generate the forecasts.



Harvey B. Westbrook, Jr.

Harvey B. Westbrook, Jr., is a Ph.D. candidate in the Department of Economics and a research assistant in the Commerce Research Office, at the University of Illinois at Urbana-Champaign.



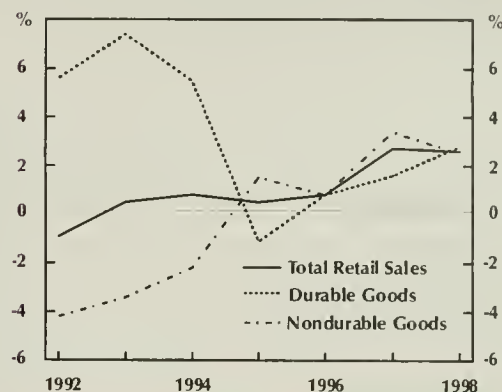
Total gross state product is expected to grow by 1.1 percent in 1996, 4.3 percent in 1997, and 1.9 percent in 1998. Growth in the goods-producing sector of the economy will be modest; however, nondurable manufacturing is expected to increase by fairly robust amounts—at a projected 2.5 percent in 1997 and 1.9 percent in 1998; but since this is a relatively small sector of the state economy, its impact on total gross state product will be moderate. Much of the expansion of gross state product is the result of growth in the services-producing sector, which is expected to expand 4.6 percent in 1996 followed by 3.8 percent in 1997 and 3.2 percent in 1998. As was the case with other economic measures, the services subsector will experience the highest increase in gross state product, expanding by 6.0 percent in 1996, 5.7 percent in 1997, and 5 percent in 1998. The strong growth in the subsector will be instrumental in the growth in total gross state product.

Even though IEM projections for this quarter are not as optimistic as previous projections have been, the Illinois economy will experience healthy growth in personal income and gross state product. Expansion of statewide employment is projected to be more modest than was previously expected, but growth in employment in Illinois should keep pace with national trends.

**IBR**

### Growth Rate in Illinois Retail Sales

Strong growth is expected in retail sales in both 1997 and 1998, after relatively low growth in 1996.



## Illinois Forecast Statistics

### REAL PERSONAL INCOME (millions of 1987 dollars)

	1992	1993	1994	1995	1996	1997	1998
<b>Total Personal Income</b>	253,606	258,473	263,152	273,061	280,177	289,353	296,621
% change	3.8	1.9	1.8	3.8	2.6	3.3	2.5
<b>Total Nonfarm Personal Income</b>	185,069	189,457	193,329	200,650	207,570	213,928	218,797
% change	3.8	2.4	2.0	3.8	3.4	3.1	2.3
<b>Goods-Producing Industries</b>	48,552	49,506	51,265	51,886	53,123	53,877	54,302
% change	1.3	2.0	3.6	1.2	2.4	1.4	0.8
Manufacturing	37,798	38,639	39,742	40,326	41,378	41,924	42,263
% change	2.3	2.2	2.9	1.5	2.6	1.3	0.8
Durable Manufacturing	21,668	22,308	23,369	23,764	24,419	24,866	25,255
% change	0.3	3.0	4.8	1.7	2.8	1.8	1.6
Nondurable Manufacturing	16,130	16,331	16,373	16,562	16,959	17,058	17,008
% change	5.1	1.2	0.3	1.2	2.4	0.6	-0.3
<b>Services-Producing Industries</b>	135,654	139,051	141,112	147,781	154,195	160,051	164,495
% change	4.7	2.5	1.5	4.7	4.3	3.8	2.8
Wholesale Trade	14,781	14,506	14,595	15,368	15,983	16,932	17,283
% change	1.7	-1.9	0.6	5.3	4.0	5.9	2.1
Retail Trade	16,232	16,582	16,935	17,575	18,638	18,980	19,065
% change	2.4	2.2	2.1	3.8	6.0	1.8	0.4
Finance, Insurance, & Real Estate	16,892	17,315	17,401	18,013	18,457	19,044	19,613
% change	10.7	2.5	0.5	3.5	2.5	3.2	3.0
Services	49,510	51,476	52,735	56,331	59,384	62,460	65,043
% change	5.7	4.0	2.4	6.8	5.4	5.2	4.1
Government	24,573	25,032	25,048	25,678	26,784	27,364	27,889
% change	3.1	1.9	0.1	2.5	4.3	2.2	1.9

**Much of the reduced growth in Illinois' real personal income in the goods-producing sector is offset by robust growth in services-producing industries.**

# Illinois Forecast Statistics

## EMPLOYMENT (thousands)

	1992	1993	1994	1995	1996	1997	1998
<b>Total Nonfarm Employment</b>	5,226.8	5,308.8	5,405.9	5,543.7	5,678.4	5,715.5	5,767.5
% change	0.1	1.6	1.8	2.5	2.4	0.7	0.9
<b>Goods-Producing Industries</b>	1,125.6	1,139.1	1,149.1	1,180.3	1,201.8	1,209.8	1,218.4
% change	-2.6	1.2	0.9	2.7	1.8	0.7	0.7
Manufacturing	911.3	925.6	930.4	951.3	969.6	970.5	973
% change	-2.3	1.6	0.5	2.3	1.9	0.1	0.3
Durable Manufacturing	534.7	544.2	548.1	568.6	585.3	588	590.6
% change	-3.3	1.8	0.7	3.7	2.9	0.5	0.4
Nondurable Manufacturing	376.5	381.4	382.3	382.8	384.3	382.5	382.3
% change	-0.7	1.3	0.2	0.1	0.4	-0.5	0.0
<b>Services-Producing Industries</b>	4,101.2	4,169.6	4,256.9	4,363.3	4,476.6	4,505.7	4,549.1
% change	0.8	1.7	2.1	2.5	2.6	0.7	1.0
Wholesale Trade	346.0	338.4	340.3	349.0	360.5	361.4	364.1
% change	-2.5	-2.2	0.6	2.6	3.3	0.3	0.7
Retail Trade	889.9	906.1	935.6	952.3	979.9	985.4	994.2
% change	-0.3	1.8	3.3	1.8	2.9	0.6	0.9
Finance, Insurance, & Real Estate	378.4	382.1	387.5	395.3	386	390.5	395.0
% change	0.2	1.0	1.4	2.0	-2.4	1.2	1.2
Services	1,410.1	1,464.9	1,502.6	1,553.8	1,618.9	1,651.3	1,685.6
% change	3.2	3.9	2.6	3.4	4.2	2.0	2.1
Government	773.9	768.2	777.6	790	802.2	785.9	777.8
% change	0.4	-0.7	1.2	1.6	1.5	-2.0	-1.0

**Strong growth is expected in retail sales in both 1997 and 1998.**

## REAL RETAIL SALES (millions of 1987 dollars)

	1992	1993	1994	1995	1996	1997	1998
<b>Total Retail Sales</b>	93,565	94,020	94,730	95,162	95,937	98,512	101,106
% change	-0.9	0.5	0.8	0.5	0.8	2.7	2.6
Durable Goods	33,800	36,286	38,280	37,851	38,158	38,751	39,831
% change	5.6	7.4	5.5	-1.1	0.8	1.6	2.8
Nondurable Goods	59,764	57,734	56,450	57,311	57,779	59,761	61,275
% change	-4.2	-3.4	-2.2	1.5	0.8	3.4	2.5

## REAL GROSS STATE PRODUCT (in millions of 1987 dollars)

	1992	1993	1994	1995	1996	1997	1998
<b>Total Gross State Product</b>	295,537	294,584	303,718	317,537	320,951	334,904	341,167
% change	7.5	-0.3	3.1	4.6	1.1	4.3	1.9
<b>Goods-Producing Industries</b>	69,998	71,971	74,684	75,754	77,908	79,345	80,554
% change	1.7	2.8	3.8	1.4	2.8	1.8	1.5
Manufacturing	56,455	58,335	60,386	61,295	63,229	64,405	65,462
% change	2.7	3.3	3.5	1.5	3.2	1.9	1.6
Durable Manufacturing	28,065	28,864	30,281	30,274	31,200	31,560	31,986
% change	1.3	2.8	4.9	0.0	3.1	1.2	1.3
Nondurable Manufacturing	28,390	29,471	30,104	31,021	32,029	32,845	33,476
% change	4.1	3.8	2.1	3.0	3.2	2.5	1.9
<b>Services-Producing Industries</b>	227,229	236,165	241,833	252,385	263,869	273,886	282,702
% change	4.5	3.9	2.4	4.4	4.6	3.8	3.2
Wholesale Trade	26,250	27,408	28,191	29,431	30,821	32,281	33,683
% change	5.1	4.4	2.9	4.4	4.7	4.7	4.3
Retail Trade	26,009	26,698	27,368	28,557	30,430	31,323	31,665
% change	2.4	2.6	2.5	4.3	6.6	2.9	1.1
Finance, Insurance, & Real Estate	52,999	55,044	56,017	57,666	59,300	60,789	62,213
% change	4.5	3.9	1.8	2.9	2.8	2.5	2.3
Services	64,040	67,378	69,814	74,533	79,034	83,552	87,696
% change	6.3	5.2	3.6	6.8	6.0	5.7	5.0
Government	27,313	27,899	27,949	28,537	29,574	30,270	30,839
% change	3.1	2.1	0.2	2.1	3.6	2.4	1.9

**Nondurable manufacturing is expected to grow at relatively robust levels.**



# 1996 Illinois Statistical Abstract Available in November

**H**OW MANY BABIES ARE BORN TO ILLINOIS women under 17 years old? How many years, on average, do convicted murderers spend in prison in Illinois? Have divorces and annulments increased or decreased in the state during the last five years?\*

The answers to these questions and thousands of others can be found in the *1996 Illinois Statistical Abstract*, to be released in November by the Bureau of Economic and Business Research.

"This immense volume is also immensely fascinating—especially for those who enjoy numbers, charts and tables along with a wide assortment of miscellaneous information," said Anna Merritt, associate director of the Institute of Government and Public Affairs, in a 1995 book review.

The *Illinois Statistical Abstract* is a convenient, informative resource book used in libraries, businesses, schools, government offices, and homes. The 1996 edition has almost 900 pages of tables, graphs, and maps with data on the state, its cities, and all 102 counties.

Compiled from more than 50 different sources, the book includes 28 chapters exploring topics as varied as agriculture, business activity, energy use, crime, education, housing, population, recreation, and retail sales.

Recently, managing editor Carole Amidon indicated, "The *1996 Abstract* includes new tables on tax rates in Illinois counties and a breakdown of tax and non-tax payments to state and local governments by tax type."

The *Abstract* is available on diskettes or CD-ROM in spreadsheet files for use on either PC or Macintosh computers. The computer package facilitates analysis by eliminating data entry costs and making the data instantly available. This format may be used to expand the level of analysis and combine categories for special research needs.

A softbound copy of the *1996 Illinois Statistical Abstract* is \$50. A computer package, which contains both the book and diskettes, is \$90. The CD-Rom package, new this year, is \$100. The form below may be used to order copies.

\*In 1994, 10,230 babies were born to Illinois women under 17 years old. Convicted murderers released from Illinois prisons in 1995 spent an average of 12.5 years in jail. Divorces and annulments have declined in Illinois, from 45,977 in 1990 to 41,856 in 1995. **IBR**

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***"This immense volume is also immensely fascinating."***

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# Illinois State Revenue Update

By J. Fred Giertz and Robert W. Resek

## Revenue growth in fiscal 1997 promises to continue, but at a slower pace than last year.

**S**TATE REVENUES IN ILLINOIS REGISTERED A strong performance in fiscal 1996 (ending June 30, 1996). State-source general fund revenues were up 5 percent over fiscal 1995 and overall general fund revenues increased by 5.5 percent for the year. The ending general funds balance of \$426 million was the highest in many years. Furthermore, the state made substantial headway in reducing its backlog of unpaid bills, especially to Medicaid providers.

Revenue growth in fiscal 1997 promises to continue, but at a slower pace than last year. After the first two months of the new fiscal year, state revenues were nearly on target. Among the major taxes, sales tax receipts fell short of expectations while the public utility tax receipts were stronger than expected. The two gambling-related revenue sources (the lottery and riverboat casino gambling taxes and fees) were weaker than expected. Although this may be a transitory phenomenon, the opening of a new riverboat casino in the Chicago metropolitan area in Hammond, Indiana, may have reduced the Illinois riverboat take.

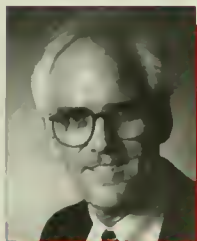
For fiscal 1997, the Institute of Government and Public Affairs (IGPA) forecasts total revenue growth of 3.1 percent with the state executive branch's Bureau of the Budget (BOB) expecting 2.6 percent growth. The legislature's Illinois Economic and Fiscal Commission (IEFC) predicts a very pessimistic 1 percent growth rate. Even with the lower growth rate, the state should not experience any unusual

**Table 1. FY1996 Illinois State Revenue Performance**

(July 1, 1996–August 31, 1996, millions of current dollars)

Revenue Source	Receipts		
	Target	Actual	Actual less Target
Individual Income Tax	814	816	2
Corporate Income Tax	50	54	4
Sales Tax	814	793	-21
Public Utility Tax	121	136	15
Cigarette Tax	50	50	0
Liquor Tax	10	10	0
Inheritance Tax	28	29	1
Insurance Tax	6	8	1
Corp. Franchise Tax	17	18	1
Interest	21	21	1
Other Tax Sources	32	36	4
<b>Total</b>	<b>1,963</b>	<b>1,971</b>	<b>9</b>
Transfers In			
Lottery	108	78	-30
Riverboat Gambling	57	38	-18
Other Transfers	55	70	15
<b>Total State Sources</b>	<b>2,182</b>	<b>2,158</b>	<b>-24</b>
Federal Aid	557	547	-10
<b>Total Revenues*</b>	<b>2,739</b>	<b>2,705</b>	<b>34</b>

\*excluding short-term borrowing



J. Fred Giertz



Robert W. Resek

Both J. Fred Giertz and Robert W. Resek are professors of economics at the University of Illinois at Urbana-Champaign and members of the university's Institute of Government and Public Affairs.

## Forecasts for FY1998 are problematic because of the uncertainty of many revenue sources, especially those associated with federal government aid.

fiscal difficulties this year. The substantial reduction of the backlog of unpaid bills has lessened demands on the state budgetary resources.

Forecasts for the next fiscal year (1998) are problematic because of the uncertainty of many revenue sources, especially those associated with federal government aid. The IGPA forecast for the growth of basic state source revenues is 3.5 percent. However, the fiscal 1998 state budget will be more constrained than this year because there will no longer be the cushion of funds freed up in 1997 by the elimination of the Medicaid backlog. **IBR**

**Table 2. Comparison of Forecasts of State Revenue (millions of current dollars)**

Revenue Source	FY96	FY97			FY98
	Actual	BOB July	IGPA August	IEFC July	IGPA
Individual Income Tax	5,669	5,907	5,929	5,800	6,142
Corporate Income Tax	978	1,006	1,008	917	1,046
Sales Tax	4,798	4,973	5,036	4,990	5,240
Public Utility Tax	833	825	813	785	800
Cigarette Tax	300	300	300	300	300
Liquor Tax	58	56	60	58	60
Inheritance Tax	188	190	182	177	191
Insurance Tax	160	160	162	160	174
Corporate Franchise Tax	100	107	109	105	112
Interest	133	129	125	105	130
Other Tax Sources	254	265	280	268	300
<b>Total</b>	<b>113,471</b>	<b>13,918</b>	<b>14,004</b>	<b>13,665</b>	<b>14,495</b>
Cook County IGT	0	251	251	251	?
Transfers In					
Lottery	594	595	600	590	600
Riverboat Gambling	205	225	225	215	226
Other Transfers	327	330	330	300	?
<b>Total State Sources</b>	<b>14,597</b>	<b>15,319</b>	<b>15,410</b>	<b>15,021</b>	<b>?</b>
Federal Aid	3,339	3,341	3,341	3,341	?
<b>Total Revenues</b>	<b>17,936</b>	<b>18,660</b>	<b>18,751</b>	<b>18,362</b>	<b>?</b>

BOB, Bureau of the Budget; IGPA, Institute of Government and Public Affairs; IEFC, Illinois Economic and Fiscal Commission; IGT, Intergovernmental Transfers.

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# ILLINOIS BUSINESS Review

Winter 1996



## *1997 Illinois Economic Outlook*

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## From the Dean

ONCE AGAIN THE COLLEGE of Commerce and Business Administration, University of Illinois at Urbana-Champaign is pleased to offer this special Outlook issue to readers of the *Illinois Business Review*. As emphasized by Chancellor Aiken's *Partnership Illinois* initiative, it is the duty and pleasure of the university to serve the citizens of the state by disseminating knowledge and research results to the people of the state. This publication, under the direction of editor Richard J. Arnould, represents one of these efforts.

The forecast for both the state and nation for 1997 is for continuing moderate growth. This view is apparent in the evaluations by University faculty and staff of the prospects for employment, personal income, retail sales, the state fiscal situation, and the economies of selected regions of the state. Several members of the faculty of the College of Agricultural, Consumer, and Environmental Studies have prepared an overview of agricultural developments and issues that will be important to the state in the future. A special feature of this year's Outlook is the series of articles that editor, Dick Arnould solicited



Howard Thomas

from outside academe. The director of the International Division of the state Department of Development and Community Affairs gives the outlook for Illinois exports. Among other real world evaluators are investment banker, Willard Bunn III who offers his view of the economy from La Salle Street, two commercial bankers who discuss credit and bankruptcy, and a real estate developer and financier who covers the status and future of alternative finance.

We are grateful to all of those who contributed their time and expertise to making this Outlook issue the best yet, particularly those from outside the academic community. Your comments and suggestions are always welcome. Please address them to Janet Fitch, associate editor, *Illinois Business Review*, 428 Commerce West, 1206 South Sixth Street, Champaign, IL 61820.

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# ILLINOIS BUSINESS Review

**Bureau of Economic and Business Research  
College of Commerce and Business Administration  
University of Illinois at Urbana-Champaign**

**Winter 1996 ♦ Volume 53 ♦ Number 4**

## **1997 Illinois Economic Outlook**

By Anil Bera and Harvey B. Westbrook, Jr. . . . . Page 4

## **Regional Forecasts for Illinois**

By Robert W. Resek and Clecio Dias. . . . . Page 9

## **Illinois Fiscal Outlook**

By J. Fred Giertz . . . . . Page 14

## **Illinois Export Outlook for 1997**

By Margaret MacLean . . . . . Page 19

## **Illinois Agriculture Evolves for a New Century**

By P. N. Ellinger, B. D. Lubben, E. A. DeVuyt, L. M. Moss, and D. A. Lins . . . . . Page 24

## **Income Trends in Illinois**

By J. Fred Giertz and Shekhar Mehta . . . . . Page 29

## **Views from the Business World**

### ***Outlook from LaSalle Street***

By Willard Bunn III . . . . . Page 31

### ***Credit, Bankruptcy, and the Information Age***

By Gregory B. Lykins and Robert L. Plankenhorn . . . . . Page 32

### ***Alternative Financing Is Here to Stay***

By Peter Fox . . . . . Page 34

### ***The Two-Pronged Solution***

By David Hunter . . . . . Page 37

## **Illinois Outlook**

By Richard J. Arnould . . . . . Page 39

The state economic data appearing in the *Illinois Business Review* are derived from various primary sources and compiled by the Bureau of Economic and Business Research. Signed articles represent the personal views of the authors and not necessarily those of the University or the College of Commerce.

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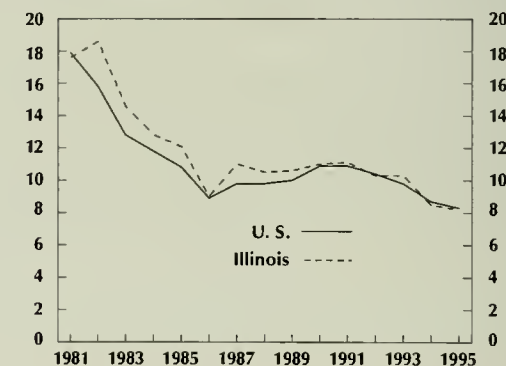


## Favorable projections combined with low inflation and low unemployment ensure a positive outlook for the state for 1997.

**E**VEN THOUGH GROWTH IN THE NATIONAL ECONOMY is not expected to be as high as it has been in the recent past, the Illinois economy will expand steadily as growth in real personal income remains strong. The service sector is expected to experience particularly robust growth in personal income as the services-producing industries continue their long-term expansion. The Illinois Econometric Model (IEM) projects promising times for Illinois even as the growth of the national economy moderates. The favorable projections of the IEM, combined with the current low levels of inflation and unemployment ensure a positive outlook for the Illinois economy for the next year, and beyond. Economists are concerned about inflationary pressure caused by the economic growth experienced in the national economy in the recent years. High employment and stable prices have made Illinois's economic picture quite good; however, the concern of economists is rooted in the effects of possible increases in wages. Increased wages would put inflationary pressure on an economy made particularly sensitive to price increases by very low unemployment. These concerns will continue to be on the minds of economists and government officials; however, evidence of impending inflation has been scarce. A useful measure of the general economic health of an economy is the "misery index," a measure popular in the late 1970s and early 1980s, which is calculated as the sum of the inflation rate

### Misery Indexes for the U.S. and Illinois

The Illinois "Misery Index" is even slightly lower than the national level.



and the rate of unemployment. Currently, national misery levels are lower than the index has been in recent years (see the chart above). In fact, we have to go back as far as the early 1960s to find a level lower than the present one. The Illinois misery index (the sum of the Illinois unemployment rate and the inflation rate for the north central region) is even slightly lower than the national level, indicating that Illinois is doing well relative to the national economy. This is primarily due to the state's relatively low unemployment— 5.1 percent in 1995 compared



Anil Bera



Harvey B. Westbrook, Jr.

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with a national unemployment rate of 5.5 percent. Both the national and state inflation rates currently stand at about 3.0 percent. While the misery index is a very rough measure of economic prosperity, it is clear that the national economy is very healthy and that Illinois should enjoy robust economic health.

## Employment

Economic forecasters at the WEFA group expect national employment growth to be modest in the next year. Sluggish growth in the service sector nationally is expected to reduce the expansion of national employment. Much of the decrease in growth is rooted to the decelerated growth of real Gross Domestic Product (GDP). The IEM projects a similar moderation in the Illinois economy. The Illinois services-producing sector is expected to expand by less than 1.0 percent in 1997 and 1998, followed by a moderate 1.2 percent growth in 1999. Growth in the services sub-sector of the economy—which includes services related to business, health, legal, engineering, and management—is expected to be slightly higher than 2.0 percent through 1999.

***Recent robust growth in Illinois employment has come from strong foreign demand for manufactured goods and a broad economic base.***

Growth in the services sub-sector will drive the expansion in employment for the state. The other major sectors of the state economy are expected to experience relatively low levels of employment growth. With the low unemployment, low employment growth could indicate a low risk of inflation.

According to the WEFA group, much of the recent robust growth in employment in Illinois has been the result of two factors, strong foreign demand for manufactured goods and the broad base of the economy. Foreign demand for manufactured goods is expected to slow in the future, and decreased foreign demand combined with a stronger dollar overseas is expected to moderate increases in Illinois manufacturing employment.



The Illinois economy is looking fairly strong.

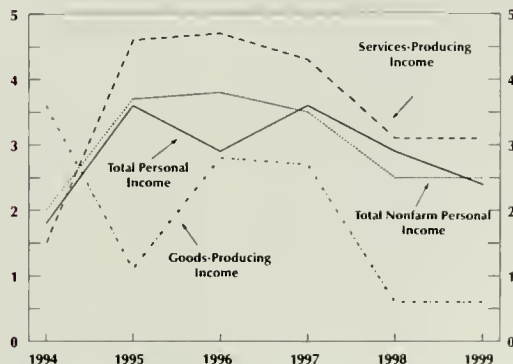
## Personal Income

Growth in real total personal income in the Illinois economy is projected to moderate from 3.6 percent in 1997 and 2.9 percent in 1998 (see the chart below). The expected expansion in Illinois real personal income is partially the result of the strength of the financial sector as well as the expansion of the services sub-sector. Finance, insurance, and real estate industries are expected to grow at 3.4 percent in 1997 and 3.7 percent in 1998 followed by a very large expansion of 4.3 percent in 1999. Increased personal income in this sector could suggest significant expansion in the financial sector in the next few years.

Even though the financial sector experienced relatively large expansion in personal income, the major source of income growth for the state will continue to be the services sub-sector. The whole services-producing sector of the economy will experience robust expansion through 1999.

### Growth in Illinois Personal Income

The major source of income growth for the state will continue to be the services sub-sector.



## Consumer Spending

Given the sluggish growth in projected retail sales in Illinois, it is unclear that the expansion in personal income will translate directly into higher consumption expenditures. Low growth in Illinois retail sales mirror the expected trends in the national economy. Retail sales are expected to increase by 3.0 percent in 1997, 2.8 percent in 1998, and 2.1 percent in 1999. Retail sales of durable goods are projected to expand 2.1 percent in 1997 and 3.1 percent in 1998. Retail sales of nondurable goods will grow 3.6 percent in 1997. Nondurable goods will be the source of much of the growth in retail sales in the state economy. National trends in personal income and savings indicate that the savings rate could increase in the near future. The WEFA group project that reductions in consumer spending should be important sources of the anticipated slowdown in the national economy. IEM projections indicate a similar pattern for Illinois. However, the moderation of the Illinois economy is expected to be milder than that of the national economy.

## Gross State Product

Illinois gross state product is expected to expand substantially during 1997. The IEM projects a 4.8 percent expansion in 1997. The sub-sector with the highest growth in 1997 will be the services sub-sector, which is anticipated to grow 5.9 percent in 1997, 5.3 percent in 1998, and 4.8 percent in 1999. The shift of the Illinois economy toward the services-producing industries is expected to continue. This fundamental change in the economy will help offset the effects of expected decreases in foreign demand

Perhaps surprisingly, the government sector is expected to experience only very moderate growth, with expansion of 2.7 percent in 1997 followed by a drop to about 2.0 percent in 1998 and 1999. The IEM has been projecting modest growth in the government sector for the past three quarters, and it appears that the trend will continue through 1999.

## Conclusion

We have been experiencing modest to high growth for almost six years at both the state and national levels. One could ask how long the expansion will last. A reasonable conjecture would be that since there has been no boom in recent years, chances for a bust any time soon are very slim. Also with the economy now more dependent on the services sector rather than manufacturing, many of the uncertainties associated with dependence on foreign demand have been reduced, and the economy is more stable.

The Illinois economy is expected to outperform the national economy through 1999. Moderation in national employment growth will have modest effects on employment in the state. In the past, foreign demand for manufactured goods was a primary source of growth in the Illinois economy, but this is expected to change as a stronger dollar flattens overseas demand for U.S. goods. However, the shift to a services-oriented economy will insulate the Illinois gross state product and employment and enable the state economy to outperform the national economy. The IEM projects a slight moderation in the overall growth of the Illinois economy. However, in context of the decrease in the growth of the national economy, the Illinois economy is expected to remain one of the strongest in the country.

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***Strong expansions of gross state product in the financial sector and in wholesale trade will boost production in the state economy.***

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for manufactured products. Strong expansions of gross state product in the financial sector and in wholesale trade will boost production in the state economy. Wholesale trade is expected to grow by 5.0 percent in 1997, 4.4 percent in 1998, and 4.3 percent in 1999. The financial sector will expand 2.6 percent in 1997, 2.5 percent in 1998, and 2.8 percent in 1999. Robust growth in these sectors will drive the increase in the Illinois gross state product for the next two years.



# Illinois Forecast Statistics

## EMPLOYMENT (thousands)

	1994	1995	1996	1997	1998	1999
<b>Total Nonfarm Employment</b>	5,405.9	5,543.7	5,686.2	5,732.7	5,778.4	5,846.3
% change	1.8	2.5	2.6	0.8	0.8	1.2
<b>Goods-Producing Industries</b>	1,149.0	1,180.3	1,201.9	1,210.6	1,218.2	1,230.2
% change	0.9	2.7	1.8	0.7	0.6	1.0
Manufacturing	930.4	951.3	969.5	969.0	969.5	974.8
% change	0.5	2.3	1.9	-0.1	0.1	0.6
Durable Manufacturing	548.1	568.6	585.9	587.2	586.9	589.7
% change	0.7	3.7	3.0	0.2	-0.1	0.5
Nondurable Manufacturing	382.3	382.8	383.6	381.8	382.6	385.2
% change	0.2	0.1	0.2	-0.5	0.2	0.7
<b>Services-Producing Industries</b>	4,256.8	4,363.4	4,484.3	4,522.1	4,560.2	4,616.1
% change	2.1	2.5	2.8	0.8	0.8	1.2
Wholesale Trade	340.3	349.0	359.7	359.7	360.9	365.2
% change	0.6	2.6	3.0	0.0	0.3	1.2
Retail Trade	935.6	952.3	984.1	992.7	997.2	1,006.5
% change	3.3	1.8	3.3	0.9	0.5	0.9
Finance, Insurance & Real Estate	387.5	395.4	386.3	391.1	395.4	397.5
% change	1.4	2.0	-2.3	1.2	1.1	0.5
Services	1,502.6	1,553.8	1,617.9	1,651.6	1,688.0	1,725.0
% change	2.6	3.4	4.1	2.1	2.2	2.2
Government	777.6	790.0	807.3	794.8	785.1	785.5
% change	1.2	1.6	2.2	-1.5	-1.2	0.1

***Income in the services-producing sector will experience robust expansion through 1999.***

## REAL PERSONAL INCOME (millions of 1987 dollars)

	1994	1995	1996	1997	1998	1999
<b>Total Personal Income</b>	263,152	272,742	280,682	290,679	299,247	306,445
% change	1.8	3.6	2.9	3.6	2.9	2.4
<b>Total Nonfarm Personal Income</b>	193,329	200,415	208,122	215,496	220,891	226,401
% change	2.0	3.7	3.8	3.5	2.5	2.5
<b>Goods-Producing Industries</b>	51,265	51,826	53,256	54,157	54,481	54,785
% change	3.6	1.1	2.8	1.7	0.6	0.6
Manufacturing	39,742	40,279	41,473	42,020	42,280	42,619
% change	2.9	1.4	3.0	1.3	0.6	0.8
Durable Manufacturing	23,369	23,736	24,489	24,925	25,199	25,585
% change	4.8	1.6	3.2	1.8	1.1	1.5
Nondurable Manufacturing	16,373	16,543	16,984	17,094	17,082	17,034
% change	0.3	1.0	2.7	0.6	-0.1	-0.3
<b>Services-Producing Industries</b>	141,112	147,607	154,614	161,339	166,410	171,616
% change	1.5	4.6	4.7	4.3	3.1	3.1
Wholesale Trade	14,595	15,350	16,041	17,078	17,446	17,884
% change	0.6	5.2	4.5	6.5	2.2	2.5
Retail Trade	16,935	17,554	18,755	19,359	19,455	19,703
% change	2.1	3.7	6.8	3.2	0.5	1.3
Finance, Insurance, & Real Estate	17,401	17,992	18,406	19,028	19,735	20,585
% change	0.5	3.4	2.3	3.4	3.7	4.3
Services	52,735	56,265	59,413	62,633	65,533	68,123
% change	2.4	6.7	5.6	5.4	4.6	4.0
Government	25,048	25,648	26,864	27,534	28,067	28,650
% change	0.1	2.4	4.7	2.5	1.9	2.1

# Illinois Forecast Statistics

## REAL GROSS STATE PRODUCT (in millions of 1987 dollars)

	1994	1995	1996	1997	1998	1999
<b>Total Gross State Product</b>	303,718	317,169	321,435	336,863	345,761	352,000
% change	3.1	4.4	1.3	4.8	2.6	1.8
<b>Goods-Producing Industries</b>	74,684	75,666	78,112	79,712	80,779	81,735
% change	3.8	1.3	3.2	2.0	1.3	1.2
Manufacturing	60,386	61,224	63,385	64,569	65,486	66,449
% change	3.5	1.4	3.5	1.9	1.4	1.5
Durable Manufacturing	30,281	30,239	31,294	31,617	31,893	32,322
% change	4.9	-0.1	3.5	1.0	0.9	1.3
Nondurable Manufacturing	30,104	30,985	32,091	32,952	33,593	34,127
% change	2.1	2.9	3.6	2.7	1.9	1.6
<b>Services-Producing Industries</b>	241,833	252,093	264,513	275,655	285,250	295,103
% change	2.4	4.2	4.9	4.2	3.5	3.5
Wholesale Trade	28,191	29,397	30,891	32,429	33,862	35,314
% change	2.9	4.3	5.1	5.0	4.4	4.3
Retail Trade	27,368	28,524	30,611	31,930	32,355	32,878
% change	2.5	4.2	7.3	4.3	1.3	1.6
Finance, Insurance, & Real Estate	56,017	57,599	59,345	60,888	62,395	64,136
% change	1.8	2.8	3.0	2.6	2.5	2.8
Services	69,814	74,447	79,115	83,805	88,225	92,459
% change	3.6	6.6	6.3	5.9	5.3	4.8
Government	27,949	28,504	29,654	30,441	31,028	31,627
% change	0.2	2.0	4.0	2.7	1.9	1.9

***Growth in the GSP for the government sector should continue at a modest rate through 1999.***

## REAL RETAIL SALES (millions of 1987 dollars)

	1994	1995	1996	1997	1998	1999
<b>Total Retail Sales</b>	94,730	95,051	96,138	98,987	101,804	103,928
% change	0.8	0.3	1.1	3.0	2.8	2.1
Durable Goods	38,280	37,808	38,250	39,043	40,251	41,055
% change	5.5	-1.2	1.2	2.1	3.1	2.0
Nondurable Goods	56,450	57,243	57,888	59,944	61,553	62,873
% change	-2.2	1.4	1.1	3.6	2.7	2.1

# Regional Forecasts for Illinois

By Robert W. Resek and Clecio Dias

**General economic conditions, regional dynamics, and local events together determine a regional economy. We present capsule forecasts for Chicago, Rockford, Bloomington-Normal, and Decatur.**

**T**HE UNITED STATES AND THE STATE OF Illinois continue to enjoy good economic growth recognized throughout this special issue of the *Illinois Business Review*. In this article, we present specific forecasts for selected urban regions of the state. The cities discussed vary greatly in the makeup of their economies and the growth they have experienced in the last half decade. Not surprisingly, we have also found significant differences in the nature and extent of growth in the various areas.

## Regional Econometric Forecasting

The wide use of econometric forecasts to understand the national and world economic situations, regions, and specific industries testifies to their value. However, users should understand that such forecasts need to be interpreted in light of an understanding of the economy under study. The value of these forecasts increases greatly when considered in combination with other information.

Forecasting is an inexact science since unexpected shocks or changes in directions, such as a war or oil embargo can radically affect an economy. A region of a state can be affected by a strike, work stoppage, or a plant opening unforeseen by econometric modeling. A specific strike or new plant opening will not

have a material impact on the national economy. In fact, there will be always be some strikes and some new plant openings each year, and the model can include the effects of these changes. For any given region, however, such changes can create a greater range of possible outcomes.

The ability of a model to forecast well is severely limited by the data available and the nature of the economy. A national economy is self-contained with limited imports and exports that are carefully measured. Therefore, with this model a forecaster improves estimates by using the relations between total production and total use of the goods produced. In contrast, a regional model cannot use these relations since the economy is open, with many goods moving from one region of the state to another and beyond and no measurements of those exports and imports.

## Economic Forces Affecting a Region

Forecasting for any region must take into account that at least three types of specific forces shape the future: general economic conditions, regional dynamics, and specific regional events.



Robert W. Resek

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Robert W. Resek is a professor of economics at the University of Illinois at Urbana-Champaign and a member of the University's Institute of Government and Public Affairs. Clecio Dias is a research associate with the Institute of Government and Public Affairs.

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## General Economic Conditions

Naturally, the general economic changes affecting the nation as a whole will have an impact on all of the regions making up the nation. Therefore, forecasters apply statistics about national directions of an industry to each region. Since each region has a specific and unique combination of industries, the different industrial structure of the region plays a critical role in the process of making a regional forecast.

For example, in the last decade, manufacturing employment has fallen in the nation because workers and firms are much more efficient in producing products. We anticipate that the national trend to reduced em-

ployment in manufacturing will continue and will affect all regions.

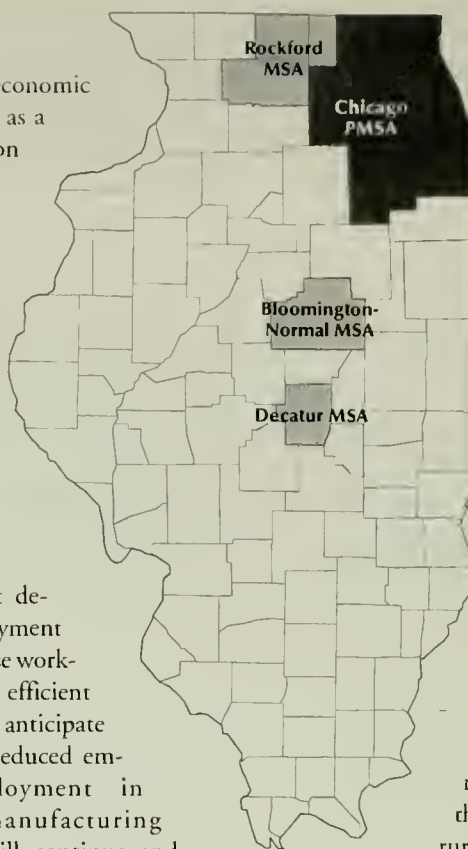
Moreover, regions with a large concentration of manufacturing will be much more affected than those that have less. If all the other factors are the same (and they rarely are), we will forecast lower growth rates in areas that have heavy concentrations of manufacturing relative to other industries.

## Regional Dynamics

Each region has its own specific energy and character. A good deal of that character is seen in the recent history of the region. Past history provides a great deal of insight into the future. In particular, areas that have had relatively good employment growth in the past are more likely to have high employment growth in the future than other areas.

## Specific Regional Events

As we have noted, the specific events, such as strikes, work stoppages, or the introduction of a new manufacturing plant or service industry, in a given region strongly affect its economy. While individuals close to the community may be able to foresee



some of these events, outside forecasters usually cannot; and so regional forecasts are more vulnerable to inaccuracies caused by unexpected events. However, when combined with the insights from people who know the local economy, they should provide significant insight into the future.

In this Outlook issue, we offer our predictions for the economies of four specific regions: Chicago, Rockford, Bloomington, and Decatur, concentrating on employment as a reliable indicator of the economies of each area. Over the forthcoming year, we plan to make forecasts for the other metropolitan statistical areas in the state, as well as for specific rural regions.

## Chicago

The Chicago metropolitan area is the state's dominant economic force and provides 70 percent of state employment. For this analysis we define Chicago as the U. S.-government defined Primary Metropolitan Statistical Area that includes nine counties (Cook, DeKalb, DuPage, Grundy, Kane, Kendall, Lake, McHenry, and Will) stretching from the Wisconsin border to Indiana (see the map above).

Since Chicago encompasses such a large economic area, we anticipate that it will be less affected by events in single industries than is likely for the state's smaller areas. Nevertheless, there are two specific industries of noticeably greater importance

***In Chicago, the service industry, including hotels, restaurants, and business services is expected to grow the most of all industries.***

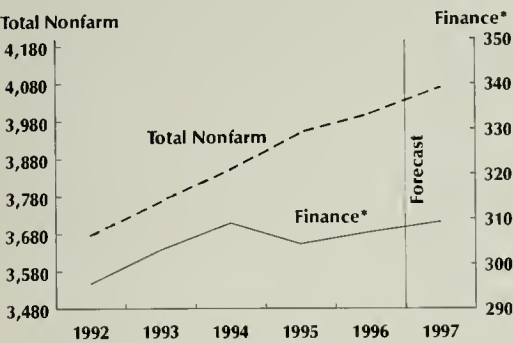
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***Events such as strikes, work stoppages, or the introduction of a new plant strongly affect a region's economy.***

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Chicago Area' Employment (thousands)

The financial services industry is of greater importance for Chicago employment than for the remainder of the state.



\*Finance, insurance, and real estate.  
'Includes Cook, DeKalb, DuPage, Grundy, Kane, Kendall, Lake, McHenry, and Will counties.



The Chicago economy benefits from a large number of jobs in financial services.

in Chicago than in the rest of the state or in the nation (see the table, page 12).

The financial services industry is of greater importance for Chicago employment than for the remainder of the state (see the chart above). This industry is expected to grow more rapidly than others in Chicago or in the state. In addition, the service industry, as represented by hotels and restaurants as well as gambling and business services, which are relatively important to the economy of the metropolitan area, is expected to grow the most of all industries. On the other hand, even though Chicago has a large share of state government, as well as many federal offices, the government's percentage of total employment in Chicago is well below the average for the state. Since government is anticipated to

grow at a stable but slow rate, Chicago benefits from having a larger share of industries with greater anticipated growth.

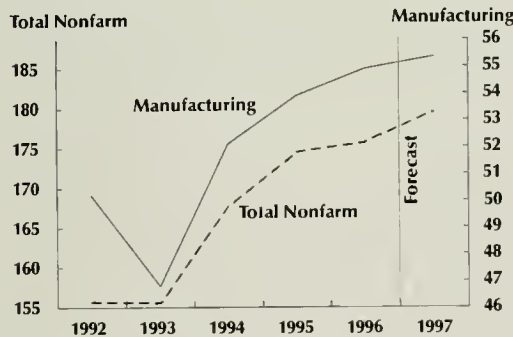
Rockford

The Rockford area, which includes Boone, Ogle, and Winnebago counties, has a heavy concentration of manufacturing (see the chart at left). The sector provides about 25,000 more jobs than would be expected based in a region with a total employment of 180,000. The relative concentration of manufacturing industries in the area not only greatly exceeds the levels in the state but even exceeds that in Decatur and Peoria, which are often thought to be the most industrial areas of the state. National econometric models forecast a reduction in growth in

**In 1997 Rockford will have the strongest employment growth of any region in the state, 2.1 percent.**

Rockford Area' Employment (thousands)

The Rockford area has a heavy concentration of manufacturing.



'Includes Boone, Ogle, and Winnebago Counties.

manufacturing for the entire country. As a result, one could anticipate that Rockford's economy would remain stable with little growth in the forthcoming year simply due to the high concentration of manufacturing.

There is, however, more to the Rockford's story than manufacturing. The community has had extensive growth in transportation and public utilities. Moreover, the area has had more employment growth in services and in finance, insurance, and real estate than most areas of the state.

The the overall strength of Rockford's economy more than makes up for its specialization in manufacturing. In fact, we forecast that in the coming year

## Employment Breakdown by Industry for Selected Illinois Regions (Thousands)

	1992	1993	1994	1995	1996	1997
<b>Chicago<sup>1</sup></b>						
Construction <sup>2</sup>	144.2	146.7	152.0	156.9	157.0	159.0
Manufacturing	628.8	639.7	653.1	658.3	662.0	664.1
Public Utilities <sup>3</sup>	221.3	227.5	233.7	235.1	238.1	241.9
Trade <sup>4</sup>	863.6	878.5	895.9	919.4	940.7	958.0
Finance <sup>5</sup>	295.6	303.1	309.0	304.4	307.0	309.3
Services	1,052.4	1,097.2	1,127.0	1,181.4	1,203.2	1,242.4
Government	469.2	472.6	480.2	493.6	491.5	496.8
Total Nonfarm	3,675.1	3,765.3	3,850.9	3,949.1	3,999.5	4,069.8

### Bloomington-Normal<sup>6</sup>

Construction <sup>2</sup>	2.1	2.4	2.6	2.7	2.7	2.8
Manufacturing	7.1	7.3	8.5	8.4	8.5	8.7
Public Utilities <sup>3</sup>	2.9	2.9	2.9	2.8	2.9	2.9
Trade <sup>4</sup>	15.7	15.5	16.5	17.2	17.4	17.8
Finance <sup>5</sup>	12.0	12.5	13.9	14.0	13.6	13.9
Services	16.9	16.3	17.3	17.5	17.5	17.8
Government	11.6	10.6	10.8	12.5	11.4	11.4
Total Nonfarm	68.3	67.5	72.5	75.1	74.0	75.3

### Rockford<sup>7</sup>

Construction <sup>2</sup>	5.9	6.1	6.4	7.0	6.9	7.1
Manufacturing	50.2	46.8	52.1	53.9	54.9	55.3
Public Utilities <sup>3</sup>	6.2	6.9	7.8	8.5	8.8	9.3
Trade <sup>4</sup>	33.0	33.8	34.8	35.9	35.9	36.6
Finance <sup>5</sup>	6.6	6.8	7.0	7.0	7.1	7.2
Services	38.3	39.4	42.8	44.9	44.9	46.5
Government	15.5	15.8	16.7	17.3	17.2	17.5
Total Nonfarm	155.7	155.6	167.6	174.5	175.7	179.6

### Decatur<sup>8</sup>

Construction <sup>2</sup>	3.1	2.8	3.3	3.9	3.8	3.9
Manufacturing	14.0	13.4	13.3	11.4	13.0	12.8
Public Utilities <sup>3</sup>	11.9	12.5	12.4	12.7	12.7	12.9
Trade <sup>4</sup>	11.9	12.5	12.4	12.7	12.7	12.9
Finance <sup>5</sup>	2.4	2.4	2.6	2.9	3.0	3.1
Services	13.0	12.8	14.1	13.3	13.2	13.4
Government	6.0	5.8	5.5	5.8	5.7	5.7
Total Nonfarm	55.0	54.8	56.4	55.2	56.7	57.3

<sup>1</sup>Includes Cook, DeKalb, Du Page, Grundy, Kane, Kendall, Lake, McHenry, and Will Counties.

<sup>2</sup>Mining and construction.

<sup>3</sup>Transportation and public utilities, excluding the Postal Service.

<sup>4</sup>Wholesale and retail trade.

<sup>5</sup>Finance, insurance, and real estate.

<sup>6</sup>McLean County.

<sup>7</sup>Includes Boone, Ogle, and Winnebago Counties.

<sup>8</sup>Macon County.

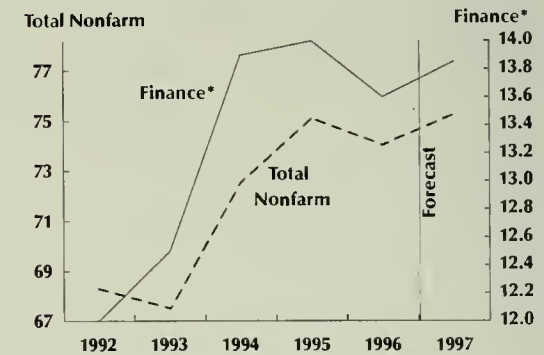
Rockford will have the strongest employment growth of any region in the state, at 2.1 percent.

## Bloomington-Normal

The Bloomington-Normal area, McLean County, is characterized by the importance of insurance firms. In Bloomington, over 18 percent of the employment is from finance, insurance, and real estate (see the chart below). Chicago, with the second largest concentration in this sector, has less

### Bloomington-Normal Area<sup>1</sup> Employment (thousands)

In Bloomington, over 18 percent of the employment is from finance, insurance, and real estate.



\*Finance, insurance, and real estate.

<sup>1</sup>McLean County.

than 8 percent of its employment from this industry. In Bloomington, the finance industry has been stable with growth of less than 1 percent annually over the last four years.

Other industries in the Bloomington area are relatively smaller, but they have higher growth rates. Over the past years, manufacturing has experienced a very large 4.6 percent growth rate, and wholesale and retail trade have enjoyed a very good 2.6 percent growth rate. With its very strong base in insurance and good growth in other industries, Bloomington can expect a very good growth rate of 1.7 percent and a very stable, high quality economic base.

## Decatur

The Decatur metropolitan area (Macon County) is heavily represented by manufacturing industries, but it also has a high level of employment in public utilities (see chart on page 13). Because of strikes and work stoppages, Decatur has suffered from wide fluctuations in manufacturing employment over the

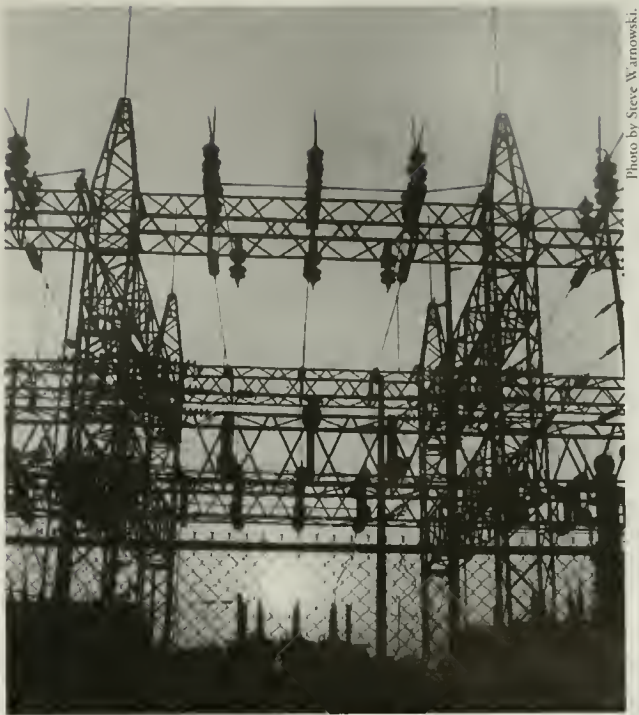


last four years—starting at 14,000 employees, dropping to 11,400, and now returning to 13,000. Despite the comeback of employment, the community has suffered a severe loss of jobs that is not likely to be recovered. We forecast a small decline in manufacturing jobs in the coming year. In contrast, the public utility employment of the metropolitan area has grown at an average annual rate of just under 4 percent.

Wholesale and retail trade represents a relatively smaller portion of area employment than it does in other areas of the state and has grown at relative slow rates. Overall, we anticipate that Decatur employment will grow at a rate considerably slower than other areas of the state. Nevertheless, employment will continue modest increases for the next year.

### Conclusion

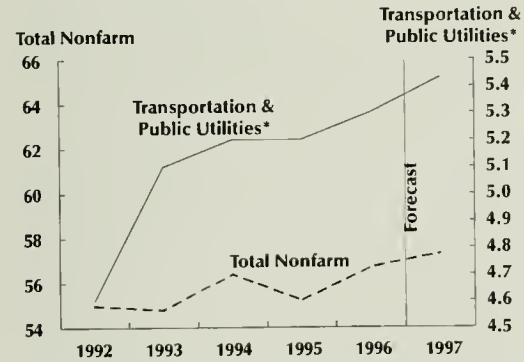
The four areas discussed here represent diverse economic regions of the state and show how the economic diversity of Illinois makes up a whole that is a microcosm of the entire nation. Each area should continue to grow in the year to come, and the growth should cut across all industries. Our projections differ from expectations about the U. S. economy since national forecasters see shrinkage in manufacturing—a phenomenon that we do anticipate in three of the communities examined here.



A positive note in the Decatur economy is the growth of employment in the public utility sector.

### Decatur Area<sup>1</sup> Employment (thousands)

The Decatur metropolitan area has a high level of employment in public utilities.



\*Excludes postal service.  
<sup>1</sup>Macon County.

**After several years when spending significantly exceeded revenues, the state's financial status is fairly healthy. The next few years will offer new challenges in funding education and welfare services.**

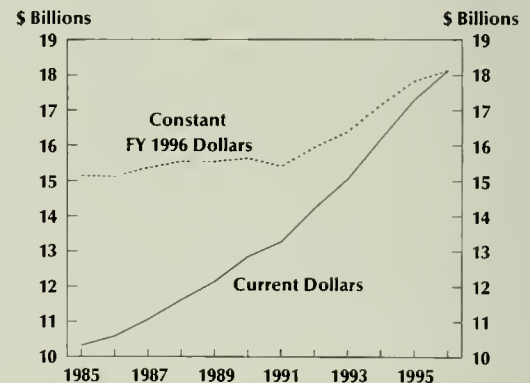
**S**TATE FINANCES IN ILLINOIS REMAIN STRONG midway through fiscal 1997. Illinois continues a remarkable recovery from the early years of the 1990s when the state budget seemed to be awash in red ink. One indication of this is the strong growth in state revenues over the last five years. (See chart at right.) Real (inflation-adjusted) revenues were virtually constant from fiscal 1985 until the end of the recession in fiscal 1991. Since that time, an expanding economy has generated consistent real increases in state revenues with no major increases in state tax rates. Including the effects of inflation, total state revenues have grown at a 6.5 percent rate over the last five years. Adjusted for inflation, growth has been a healthy 3.3 percent. (For an overview of the state revenue mix, see the chart on page 15.)

This favorable revenue picture is a consequence of the state's strong economy. The national recession in 1990 was much milder in Illinois than in many other states, and the state grew more rapidly than the nation as a whole during the recovery period. After more than a decade with state unemployment rates above the national average, Illinois unemployment has been consistently below that of the nation for the last several years.

Another measure of the state's fiscal health is the deficits and surpluses that we have experienced in recent years. (See the chart, page 15.) Early in the 1990s the state endured several years when spending significantly exceeded revenues. The basic surplus/

## State Revenues, 1985-1995

State revenues have grown strongly in the past five years.



deficit measure (revenues minus expenditures) actually understated the true picture, since the state was then pushing unpaid bills into the following fiscal year. A more accurate measure would include the basic surplus/deficit minus the increase in unpaid bills. The last four years of revenue surpluses have allowed the state to get back on its feet. In addition to the expanding economy, increased discipline in the expenditures in the early 1990s allowed the state to control the deficits and, eventually, reach a surplus without major tax increases.



J. Fred Giertz

J. Fred Giertz is a professor of economics at the University of Illinois at Urbana-Champaign and a member of the University's Institute of Government and Public Affairs.

The state's current position is similar to that of many other states and even the federal government. Most states have done well fiscally in recent years. For example, all states are expected to report a combined surplus of \$48 billion for the year ending December 31, 1996, up by one-third over the preceding two years. Similarly, the federal government is expected to register its lowest deficit in over 15 years because of the strong economy.

The strong fiscal position of the state, along with the control of both houses of the General Assembly and the governor's office by Republicans, resulted in a relatively uneventful legislative session in 1996. There were substantial increases in appropriations for education, but no fundamental reform of the state's system of educational finance. The backlog of Medicaid bills, amounting to well over a billion dollars in the early part of the decade, was finally reduced to a normal level. The elimination of the need to use current revenues to fund old bills in fiscal 1997 actually freed up additional, one-time funds for appropriations this fiscal year.

One-third of the way into the fiscal 1997, the state is close to meeting its targeted revenue levels. (See the table, page 17) However, unlike the last few years, revenues are not running ahead of projections. During the current expansion, the state experienced a series of welcome surprises when actual revenues exceeded levels forecast, often by \$100 million or more. While the Illinois economy is still expanding, the rate of growth seems to be slowing, making another unanticipated revenue surge is unlikely for fiscal 1997.

## Future Prospects

This leads to the conclusion that the state's fiscal position is likely to be somewhat tighter in future years beginning in fiscal 1998 (beginning July 1, 1997). Even though most observers do not see an economic downturn in the next 18 months, it is unlikely that the Illinois economy and the tax revenues will continue the unusually high rates of growth of the last several years. Furthermore, there will be no repeat of the one-time windfall in fiscal 1997.

On a more positive note, Medicaid costs (and medical care costs in general) seem to be increasing at a rate near that of the general rate of inflation as opposed to the double-digit rates experienced in the late 1980s and early 1990s. While the recent changes in the federal welfare system promise to have major effects in the long run, these will not be felt by the state for at least a year or more. The federal changes limiting welfare eligibility while giving states considerably more flexibility in structuring welfare programs (both cash benefits and medical aid) will

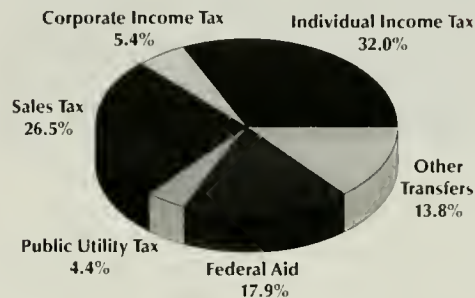
***The expanding economy, and increased discipline in expenditures in the early 1990s allowed the state to control deficits and, eventually, reach a surplus without major tax increases.***

provide the state with as much or more federal aid for the first year or two as would the old program. In the longer run, however, the rate of growth of federal aid will be considerably slowed. This will require the state either to reduce benefits to welfare recipients or to raise additional state-level revenues to offset the federal changes. The increased flexibility from relaxed federal mandates may make this task more manageable, but the state will still be faced with significant challenges in the welfare area over the next five to ten years.

Even though the short-run fiscal picture is bright, Illinois still faces a number of long-term problems. While the state has recovered more or less fully from the problems of the early 1990s, it is not prepared to meet the problems of a future recession without some major and painful adjustments. Furthermore, Illinois still faces an underlying structural deficit. Projections of the costs to maintain current levels of state programs in the face of changing economic and demographic factors (such as an aging population and increased numbers of prison inmates) suggest that costs will grow at a faster rate

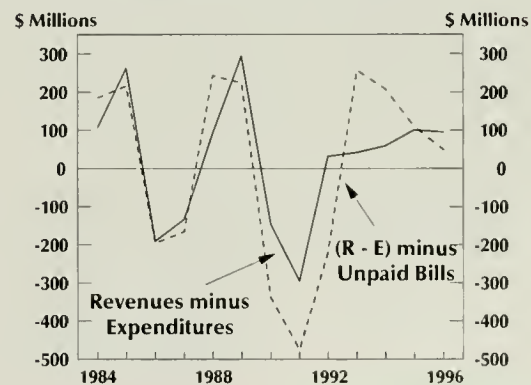
### State Revenues Sources, FY 1996

The sources of Illinois revenues are quite mixed.



### Alternative Deficit Measures

A more accurate deficit measure would include the basic surplus/deficit minus the unpaid bills.







The James R. Thompson Center in Chicago.

than projected revenues under our current tax system. This means that the state will eventually face the choice of either reducing services or increasing tax rates.

## Current Issues

Property tax caps (more formally Property Tax Exemption Limitations) continue to be an important issue in Illinois. After several years of debate, the Illinois General Assembly in 1996 approved legislation allowing downstate counties to implement property tax caps. Tax caps were applied by the state to the Collar Counties (DuPage, Kane, Lake, McHenry, and Will) around Chicago in

1991. They were extended to Cook County in 1995. The caps were initially a response to rapidly rising assessed values and, thus, property tax extensions in the Collar Counties and suburban Cook County. Local jurisdictions found that they were able to increase revenues substantially without raising tax rates because of the increased base.

The caps generally limit property tax increases for a jurisdiction to the lesser of 5 percent or the rate of inflation. The caps do not apply to home-rule jurisdictions—generally municipalities over 25,000 population and to the Cook County government. They also do not apply to newly annexed areas or to new construction or for levies to pay off previously issued bonds. They can be exceeded by voter approval of a referendum.

Proponents view property tax caps as a low-cost way of restraining the growth of local jurisdictions that somehow has not been accomplished by the normal process of electing representatives (such as school and county board members) who make tax and expenditure

decisions. Opponents see tax caps as a “blunt instrument” that reduces the flexibility of local governments to meet changing needs. Both sides view caps as a makeshift remedy for dealing with a more fundamental problem in Illinois of over reliance on the property tax, especially for the financing of schools. Early studies have found that the tax cap legislation enacted in 1991 for the Collar Counties has had a significant restraining effect on many local districts, particularly school districts.

The new legislation passed in 1996 differs from the previous caps in that they are allowed, but not mandated by the state for downstate counties. To implement property tax caps, a county board in a downstate county must vote to have a binding referendum on the issue. If approved by the voters, the caps would become effective on January 1 of the following year. Caps would only apply to multi-county jurisdictions if all the counties containing the jurisdiction vote on them, and if the caps are approved by voters in counties containing a majority of the jurisdiction’s assessed value.

In the November 5, 1996 general election, property tax extension limitation referenda passed in 18 of the 19 Illinois counties where the issue appeared on the ballot. The measure was approved in Boone, Champaign, Christian, Franklin, Jackson, Kankakee, Lee, Logan, Macoupin, Menard, Monroe, Morgan, Randolph, Schuyler, Sangamon, Union, Williamson, and Winnebago Counties. These caps will become effective in 1997, which means that they will apply to the 1997 levies for taxes payable in 1998. Massac County voters were the only ones in the state to reject caps. Several other counties are expected to vote on the issue in 1997.

A more fundamental issue facing the state is *educational finance reform*. There appears to be general agreement that the current system of educational finance, which relies heavily on the local property tax, needs to be modified. Critics suggest that the current system results in inappropriate disparities in expenditures among rich and poor districts, inadequate levels of spending in many districts, and over-reliance on the property tax as a source of financing.

While there is consensus about the failings of the current system, there is no general agreement about what precise reforms will be needed to address these problems.

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***The tax cap legislation enacted in 1991 for the Collar Counties has significantly restrained many Illinois school districts.***

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# One-third of the way into fiscal 1997, the state is close to meeting its targeted revenue levels.

In the spring of 1996, the Governor's Commission on Education Funding, chaired by Stanley O. Ikenberry, president emeritus of the University of Illinois, recommended major changes in the method of financing elementary and secondary education in the state of Illinois. The report called for a major increase in state funding for education, which would be used to increase overall spending for education while reducing the current heavy reliance on the local property tax as a funding source. Further recommended was the establishment of a basic level of per pupil spending (estimated at \$4,225 for 1995-1996) for all districts in the state. It is estimated that this would require \$500 million in additional state aid. This proposal would guarantee a minimum level of per pupil spending, while reducing the disparities among school districts in the state.

In addition, the plan called for a reduction of local property taxes used for elementary and secondary education by \$1.5 billion or 25 percent, which would be replaced by increased state aid. The Commission suggested that the estimated \$2 billion in additional state revenue come, at least in part, from an increase in the state's income tax. A 1 percentage point increase in the state's current 3 percent tax rate was discussed in the press as a possible option. The Commission put forward a draft of a state constitutional amendment containing the broad outlines of its plan for consideration by voters in the November general election.

Although Governor Jim Edgar endorsed the general principles of the plan and urged the General Assembly to send the amendment to the voters in November, it was summarily rejected by the legislature, which considered it "too hot" an issue for an election year. However, legislative leaders from both parties have stated their intention to revisit the issue in 1997.

The rejection of the commission's proposal in 1996 illustrates the problems faced by advocates of education finance reform in Illinois. A clear majority of both legislators and citizens believe that the

current system, with its heavy reliance on the local property tax, needs to be changed. Yet, it has proven impossible to devise a politically acceptable plan to replace the current system. In particular, the size of the state-level tax increase necessary to accomplish the dual objective of increased funding and property tax relief is a major hurdle. (See chart next page) Note that property taxes currently going to fund schools exceed both the individual income tax and the state sales tax, and they dwarf the corporate income tax and state gambling revenues.

There are also extremely divisive issues concerning the distribution of increased state tax revenues.

## Property taxes currently going to fund schools exceed both the individual income tax and the state sales tax and dwarf the corporate income tax and state gambling revenues.

Poor districts believe they should be the major beneficiaries of state aid to increase their overall level of spending. Richer districts, bearing a heavy property tax burden, believe state aid should be directed their way to reduce property tax reliance. Satisfying both groups is extremely expensive. These are the shoals where previous reform plans have floundered. It will be interesting to see if these problems can be overcome in 1997. (Continued on page 18.)

### Illinois State Revenue Performance, FY1997

(July 1, 1996–October 31, 1996, millions of current dollars)

Revenue Source	Receipts		Actual less Target
	Target	Actual	
Individual Income Tax	1,728	1,748	20
Corporate Income Tax	242	258	16
Sales Tax	1,679	1,636	-43
Public Utility Tax	249	289	40
Cigarette Tax	100	100	0
Liquor Tax	19	19	0
Inheritance Tax	69	57	-12
Insurance Tax	34	35	1
Corp. Franchise Tax	134	37	3
Interest	41	46	5
Other Tax Sources	61	69	8
<b>Total</b>	<b>4,256</b>	<b>4,293</b>	<b>37</b>
<b>Transfers In</b>			
Lottery	170	175	6
Riverboat Gambling	75	74	-1
Other Transfers	110	106	-4
<b>Total State Sources</b>	<b>4,611</b>	<b>4,649</b>	<b>38</b>
Federal Aid	1,114	1,010	-104
<b>Total Revenues*</b>	<b>5,725</b>	<b>5,658</b>	<b>-66</b>

\*excluding short-term borrowing



## A Final Evaluation

Despite the problems discussed here, the Illinois fiscal system, while imperfect, is basically sound. Nevertheless, Illinois' state tax system gets little respect. Recently, two studies—one by the conservative Cato Institute and the other by the liberal Citizens for Tax Justice—have blasted the Illinois revenue system.

The Cato study gave Governor Edgar a grade of D in their "Fiscal Policy Report Card." Only four governors received a lower grade. Edgar was criticized for allowing the 1989 income tax increase (from 2.5 percent to 3.0 percent for the state's

individual income tax) to become permanent. He was also taken to task for suggesting that the state's voters should be allowed to consider the educational finance plan suggested by the Ikenberry Commission. Meanwhile, the Citizens for Tax Justice put the Illinois state and local tax system in the "Terrible 10" category for its lack of progressivity and its relatively heavy burden on the poor. Their findings were based on the state's heavy reliance on property taxes and a flat rate income tax.

Despite these criticisms, Illinois has a moderate tax climate with many good features. Illinois' combined state and local tax burden in per

capita terms in 1993 was slightly above the national average, but about 5 percent below the average for the other (10) large industrial states. When compared with state income (that is, when considering taxes as a percentage of state personal income), Illinois taxes were below the national average and substantially below the industrial states' average. In addition, the percentage of Illinois's personal income going to state and local taxes in 1993 was considerably lower than ten years ago. Illinois clearly is not a high tax state. During this same period, Illinois' economy performed very well. The state

now is the ninth highest in terms of per capita income and its income growth has exceeded the national average—no small accomplishment for a high income, highly industrialized state with slow population growth.

In addition to its moderate tax rates, the Illinois fiscal system has a number of other desirable attributes: (1) a low, flat rate income tax for both individuals and corporations that is simple, efficient, and productive; (2) a high level of conformity with federal tax rules which reduces compliance costs; and (3) a relatively good mix among the major tax sources (the income, sales and property taxes), despite a somewhat heavy reliance on local property taxes.

As noted, the state has managed to overcome the fiscal problems created by the 1990 recession and the large increases in the cost of medical care for the poor without a general tax increase. Stability of this sort is an important virtue of the state's fiscal system. The state has also moved away from the "let's make a deal" era of providing fiscal concessions to new business to a more evenhanded policy for attracting and retaining companies.

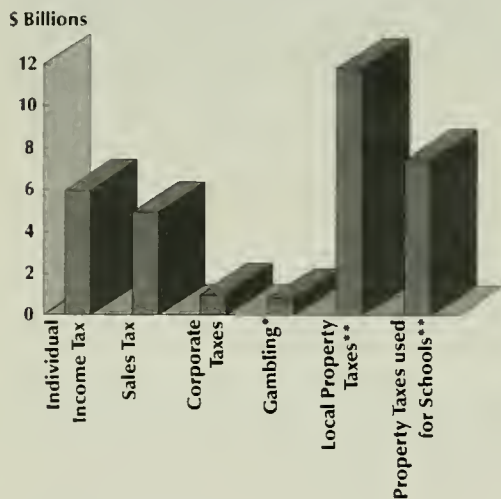
If Illinois is doing so many things right, what is the basis of the low evaluations? The Cato study gives a high rating to governors of states in which taxes have been cut, not to states that have maintained low rates. They grade on improvement (lowered taxes), not achievement (low taxes).

The Citizens for Tax Justice concern is almost exclusively with issues of equity or fairness (relating to the state's flat-rate income tax), not with efficiency or competitiveness. They seem not to realize that there are limits to the progressivity that can be achieved in state and local taxes without affecting a state's competitive position. The efficiency gains from a flat rate tax are likely to outweigh the distributive drawbacks.

In summary, while Illinois faces a number of challenges in the upcoming years, the state has a basically sound revenue system—one that can serve as the foundation for various reforms that can make it even better in the future.

### Local Property Tax and State Revenue Sources, FY1996

Property taxes now going to fund schools exceed the individual income tax and state sales tax and dwarf the corporate income tax and gambling revenues.



\*Lottery and Riverboat Gambling

\*\*Calendar Year 1995



# Illinois Export Outlook for 1997

By Margaret MacLean

## The state's position as a leading supplier of the technology required to build the world's emerging economies should provide a solid base for future expansion in exports.

ILLINOIS CONTINUES TO OUTPACE THE NATION AS A whole in export growth. In 1995, Illinois exports increased to \$32.6 billion, a 23.6 percent increase over the previous year, and well ahead of the national growth rate of 13.8 percent. This trend should continue for a variety of reasons, most important being the ability of Illinois to supply the world's most active and growing economies with core materials—industrial and capital goods that are essential to building the infrastructure of the world's developing nations.

The type of products and services that Illinois is sending abroad provides the key to the state's future export growth. More than 70 percent of Illinois's exports are in high-technology sectors such as electronics, computers, and transportation equipment.

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***More than 70 percent of Illinois's exports are in high-technology sectors such as electronics, computers, and transportation equipment.***

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Illinois's export growth in 1995 in electronics (41.7 percent) and industrial equipment (15 percent) remained strong and is expected to continue to

increase throughout 1996. In fact, Illinois's growth in the export of electronics and other high-tech products nearly doubled the national average in 1995. As the global market continues to modernize, the competitive advantage of Illinois in these and other high-tech industries will continue to be tapped, increasing the number of value-added jobs in the state. Simply defined: Illinois's success in exporting comes from producing high-quality products, mainly capital goods, for the highly competitive world marketplace. (See sidebar on page 20.)

### Illinois's Global Future

Some of the factors that contribute to a positive global outlook for Illinois and suggest that the state will continue as an export-driven economy are

- ◆ Illinois exports less of its gross product than the United States as a whole and as compared with other states, indicating that there are opportunities for increased exports over the long haul.

- ◆ The world market is four times larger than the U.S. market and is predicted to grow as much as 40 percent faster than the U.S. market through the year 2000. The industrial centers and targeted industries within Big Emerging Markets (markets that will account for the overwhelming incremental growth in world imports over the next decade) are predicted to grow even faster. Illinois already has a strong track record in many of the world's most expansive markets, indicating even greater economies of scale are expected from Illinois firms exporting to these rapidly growing economies.



Margaret MacLean

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Margaret MacLean is the managing director of the International Business Division for the Illinois Department of Commerce and Community Affairs and trade director for the State of Illinois.

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♦ Illinois produces what the world's most rapidly growing economies need—industrial machinery, telecommunications equipment, electronics, financial services, and products related to the needs of basic economic development. In other words, the products and services needed to build a strong infrastructure and economy.

Some market trends to watch are the Big Emerging Markets, growth in major trading blocks such as ASEAN and NAFTA, steady growth of trade with

traditional trade partners, the increasing importance of the Mexican market, the explosive growth of trade in the Chinese economic area, and the new possibilities for trade with South Africa.

## The Big Emerging Markets

Big Emerging Markets or BEMs are the markets that will double their share of world imports (and imports of Illinois products), rising 38 percent by 2010. No other market category shows such dramatic growth potential.

The BEMs offer tremendous opportunities for Illinois exports. While Europe and Japan continue to be among the top ten trading partners for Illinois firms, current trends show slower growth in these traditional markets than in the BEMs. Most of the BEMs now rank among Illinois's top ten trading partners and are all among the top 25 world markets for Illinois products.

There are big differences between BEMs and Illinois's more traditional trading partners, such as Japan, Britain, or Germany. There are still trade barriers to entering these markets, and full respect for commercial systems are often still developing, or lacking altogether. The nature of competition we face in these markets is dramatically different from prior experience, and they have economies that are growing twice as fast as the rest of the world. Still, our economic stakes in BEMs are enormous. The 10 BEMs as a group are importing about as much merchandise from the United States as Japan and the European Union combined. In fact, during the period 1990–2010, the BEMs could account for at least \$1 trillion in incremental U. S. export growth.

## Major Trading Blocks such as ASEAN

Some BEMs are viewed as regional economic areas rather than as isolated markets. The Association of Asian Nations (ASEAN) began as a geo-political entity in 1967 and has developed into a free trade area. The resulting ASEAN market is one of the largest and most dynamic in the world. By some

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## Exports: A Vital Component of the State's Economy

- ♦ Companies that make the leap into export are growing faster than those who do not.
- ♦ One in eight jobs in Illinois is dependent on exporting—one in four in the manufacturing sector. As of 1995, it is estimated that more than 625,300 Illinois residents were employed by jobs sustained by direct and indirect exports.
- ♦ Every dollar of Illinois exports generates \$.04 of state tax revenue.
- ♦ Export-related jobs are globally competitive and proving to be the key to the creation and retention of higher paying and permanent jobs in Illinois. Wages for workers in the manufacturing and service exporting sectors, where Illinois products are the most competitive, exceed the U.S. average by 24 percent.
- ♦ Illinois ranked fifth in the nation among the top ten exporting states in 1995; this is the second consecutive year that Illinois has improved its ranking. Illinois exports have grown by double digits in 1993, 1994, and 1995—24.6 percent, 20.2 percent, and 23.6 percent, respectively.
- ♦ Illinois exports reached an all-time high of \$32.6 billion in 1995, an increase of 23.6 percent over 1994 and nearly double the 13.8 percent increase of all U.S. exports for the same period.
- ♦ Exporting companies pay employees more than plants that produce only for domestic consumption.
- ♦ Worker productivity at exporting companies is 30 to 50 percent higher than that of nonexporters.
- ♦ Innovation is stronger at exporting companies. Exporters adopt new technologies far more frequently than nonexporters and report more significant benefits from doing so. This tendency is especially strong in fabricated metal products, machinery, computers, and transportation equipment—key industrial sectors in Illinois.
- ♦ Exporting companies tend to be larger than others, on average four times as large in employment and six times as large in sales.
- ♦ Sales per employee tend to be 50 percent greater in exporting companies than in nonexporting companies.
- ♦ Value added per employee is up to 33 percent greater in exporting plants than in nonexporters.

Figures derived from the Washington-based Institute for International Economics, the National Association of Manufacturers, and the Massachusetts Institute for Social and Economic Research.

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***Growth, and the problems it creates, is generating extraordinary opportunities throughout Southeast Asia.***

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## The Big Emerging Markets

- ◆ The Chinese Economic Area (China, Hong Kong, and Taiwan)
- ◆ South Korea
- ◆ The Association of Southeast Asian Nations or ASEAN (Brunei, Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam)
- ◆ India
- ◆ South Africa
- ◆ Poland
- ◆ Turkey
- ◆ Mexico
- ◆ Brazil
- ◆ Argentina

estimates, ASEAN will have a combined population of between 500–700 million by 2010 and a combined GDP of \$1.1 trillion. There are six ASEAN countries—Brunei, Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam—which have a combined GDP likely to reach \$1.1 trillion in little over a decade. And by that time, U.S. exports to the region will probably equal or exceed exports to China or Japan. Rapid growth, expanding purchasing power, and falling trade barriers have made the ASEAN region one of the most dynamic economic areas in the world.

Growth, and the problems it creates, is generating extraordinary opportunities throughout ASEAN. Increased demand for and expenditure on quality housing, environmental concerns, and health care (creating new markets for technologies) is emerging along with regional economic success. Breakneck growth is straining every kind of infrastructure, creating what is perhaps the best single market for Illinois goods and services. In infrastructure sectors such as power generation, telecommunications, and transportation, countries such as Malaysia, Thailand, and Indonesia are all undergoing similar, unprecedented development and privatization. In industries such as autos and auto parts, the traffic-clogged streets of Kuala Lumpur, Bangkok, and Jakarta point to the rapid cross-regional growth in demand for cars, trucks, motorcycles, and their parts and components.

## Steady Growth with Traditional Partners

Fifty percent of Illinois exports go to mature markets such as Europe, Canada, and Japan. A mere 3

percent rise in exports to these mature markets represents an enormous dollar increase. In addition, in both traditional and Big Emerging Markets, targeting opportunities for industrial sectors with the greatest potential is the key to success for Illinois and U.S. products.

## Canada

Canada is Illinois's largest export market, absorbing approximately one-quarter of the state's exports and buying more U.S. products than the combined countries of the European Union. In 1995, two-way merchandise trade reached \$15.74 billion, an increase of 18.3 percent over 1994. This is very significant market growth by any standards. As the main market for Illinois products, Canada purchased 23 percent, or \$6.9 billion in Illinois exports in 1995.

Proximity, common language (for the most part), similar consumer tastes, similar commercial environment, and NAFTA benefits will continue to encourage Illinois companies to essay the vast Canadian market. Canada is not a exotic export market, but offers essential growth opportunities and a high probability of success with the minimum personal risk and expended time and money.



Photo Courtesy of DCCA

Potential distributors explore the variety of Illinois products at a DCCA trade fair.



## **Japan**

Japan is second only to Canada in terms of imports from Illinois. Economists agree that currently personal consumption, rather than corporate spending on plant and equipment, serves as a major engine for the world's second largest economy. During the first half of 1996, sales to Japan from Illinois in electronics, chemicals, transportation, and primary metals actually declined. After a number of slow years due to an economic downturn in Japan, inquiries for new projects as well as expansion of existing facilities increased during 1996. Overall, export growth from Illinois to Japan increased 38 percent in 1995. Expect far slower growth in 1996 with exports from Illinois to Japan increasing by only 5 to 10 percent. Illinois has been fortunate that the Japanese companies that have invested in the state have not been greatly affected by their country's economic downturn, and, therefore, the state did not lose the number of investments that some other states experienced.

## **Europe**

Exports from Illinois to markets including Germany, the United Kingdom, Belgium, the Netherlands, and France are expected to continue to increase by 10–20 percent throughout 1996.

## **Mexico**

The Mexican market, with its recent turbulence, typifies both the promise and problems of doing business in emerging markets. In the wake of its

to liberalize its economy and to meet its NAFTA commitments. Many analysts are optimistic about the prospect for significant recovery in 1996. Due to continued growth in exports, Mexico registered a trade surplus of \$6.78 billion for the first 11 months of 1995.

Notwithstanding the political, economic, and financial problems experienced by Mexico in the two years since the implementation of NAFTA, the free trade pact has proved beneficial to Illinois. Since the agreement became effective on January 1, 1994, Illinois has experienced an increase of 33,600 manufacturing jobs, with 93 percent of the increase (31,400) occurring in Illinois's top ten export industries. In addition to growth in jobs, Illinois wages have been improved substantially since NAFTA went into effect. The average manufacturing wage in the top ten industries has been consistently higher than the average for all manufacturing.

With a population of over 90 million, Mexico stands to be one of the largest, if not the largest, future trading partner for the United States. As the NAFTA relationship develops, commercial ties will strengthen. As Mexico's economy continues to recover, Illinois stands to benefit from increased demands for technology, electronics, capital goods, and know-how.

## **The China Triangle**

This volatile trading area, the Chinese Economic Area (CEA), made up of China, Hong Kong, and Taiwan, is by far the biggest of the Big Emerging Markets worldwide. The CEA, the seventh largest economy in the world, with a combined GDP of \$800 billion, offers the largest potential market for infrastructure spending in the world.

China is Illinois's sixth largest export destination and stands to further its growth. All three markets continue to develop as a regional center for trade not only in manufactured goods, but also in services. Services currently account for almost 83 percent of Hong Kong's GDP, and the burgeoning Hong Kong services sector—design, marketing, advertising, financial, legal, telecommunications, and transportation/distribution—are sandwiched between China's massive manufacturing capability and the country's huge market for foreign-sourced goods and services.

The transition on July 1, 1997, from British to Chinese sovereignty overshadows every other issue in shaping Hong Kong's current and future political and economic agenda. Business and investor confidence has stayed strong in the face of increased Sino-British tensions over proposed electoral reforms. Hong Kong continues to be a destination for U.S. and international investment. Chinese investment

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***Notwithstanding the problems experienced by Mexico in the two years since NAFTA, the pact has proved beneficial to Illinois.***

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worst economic crisis since 1932, Mexico experienced a very turbulent year in 1995. Inflation skyrocketed from 7 percent in 1994 to 52 percent in 1995. After experiencing growth of 3 percent in 1994, the Mexican economy suffered a 7 percent decline in growth last year. Foreign investment totaled only \$4 billion for fiscal year 1995. However, in the wake of Mexico's financial storm, two key points must be made. As a result of the *peso* crisis, Mexico has enacted an economic program to restore business and consumer confidence and stabilize the economy. And despite the crisis, Mexico continues

in Hong Kong is also growing rapidly. With China's continued market-opening policy, Hong Kong companies will play an increasingly important role in promoting China's economic development by providing capital and technical expertise. Hong Kong will continue to be China's window to the world—a strategic gateway to foreign business contracts, modern technology, and investment. Illinois exports to China, currently \$1.35 billion, and to Hong Kong and Taiwan, \$800 million and \$632 million, respectively, are predicted to increase with the region's dramatic growth.

### ***South Africa: Great Expectations***

Already the most advanced, broadly based, and productive economy in Africa, with a GDP that is 45 percent that of the whole continent, South Africa's transformation to a democracy will finally enable it to harness and unleash all of its potential, thrusting the nation into true BEM status. South Africa represents one of the last major markets not yet thoroughly explored, particularly by American exporters and investors who for two decades stayed away in response to apartheid policies and sanctions. The country possesses a modern infrastructure supporting an efficient distribution of goods to major urban centers throughout the region and well-developed financial, legal, communications, energy, and transport sectors.

In April 1996, South Africans celebrated the second anniversary of the first all-race elections, which resulted in the election of President Nelson Mandela and his African National Congress government. While there is much to celebrate as South Africa continues to take its place in the world community, the country is facing imposing economic, political, and social challenges that lead some to suggest that the prolonged honeymoon period is over. Despite these challenges, the South African economy continues to grow. Experts are forecasting 4 percent growth for 1996.

At the same time, because the country's currency, the rand, is weaker, South African exports are expected to increase substantially. With a weaker rand,

prices become more expensive for the South African importer, and, therefore, less competitive. Sectors that involve high-value-added products should continue to do well as industrial development and efforts to improve productivity continue to require more equipment and machinery.

Despite these issues, Illinois will continue to hold its own in its trade balance with South Africa. Top exports from Illinois to South Africa include key materials for industrial development: industrial machinery, computers, electronics, and instruments—all needed to build a strong physical infrastructure.

As South Africa aims to leap forward and enhance its technological capabilities, the realm of computer hardware, software, peripherals, and information technology are finding voracious demand in South Africa. Currently, it is estimated that the United States holds almost 30 percent of the markets in hardware and over 70 percent for computer software in South Africa. With the largest number of Internet subscribers on the continent, South Africa is striving to catch up with the Europe and the U.S. in this area.

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***The Chinese Economic Area, the seventh largest economy in the world, with a combined GDP of \$800 billion, offers the largest potential market for infrastructure spending in the world.***

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***South Africa represents one of the last major markets not yet thoroughly explored, particularly by Americans.***

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# Illinois Agriculture Evolves for a New Century

By Paul N. Ellinger, Bradley D. Lubben, Eric A. DeVuyst, LeeAnn McEdwards Moss, and David A. Lins

**The 1996 farm bill, new technology, structural changes in the number, size and type of farms, as well as continuing concern for environmental issues in farming will all affect Illinois agriculture in the coming year and the future.**

**M**ANY NEW ISSUES AND CHALLENGES FACE Illinois agriculture in the transition into the next century. Livestock production, environmental issues, agricultural policy, and site-specific agriculture are four key issues facing the farming community. These issues have important implications for all residents and businesses in Illinois.

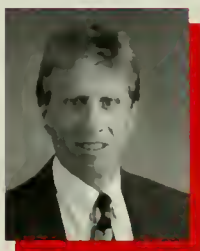
## Agricultural Policy

The passage of the Federal Agricultural Improvement and Reform (FAIR) Act of 1996 this past April marked a watershed event in agricultural policy. For the first time in more than 50 years, federal farm programs changed direction significantly from production controls and income supports to fixed support payments not tied to production. The effects of this change will become apparent over the next

seven years and will have a significant influence on Illinois agriculture.

The language of the FAIR Act specified eligibility for enrollment in a seven-year contract running from 1996 through 2002. Over this period, program participants will receive a contract payment based on their historical crop acreage and production. Congress authorized total contract payments for program commodities at \$5.57 billion dollars for 1996, a level that will eventually decline to \$4.008 billion in 2002. These levels represent a continuation of the decline in overall federal farm program supports over the last decade, since the record high level of \$26 billion in total government support payments in 1986.

The change in federal farm programs will bring significant changes in the way Illinois farmers make their business decisions. The FAIR Act of 1996



Paul N. Ellinger



Bradley D. Lubben

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This report was prepared by the following members of the College of Agricultural, Consumer, and Environmental Sciences, University of Illinois at Urbana-Champaign: Paul N. Ellinger (coeditor), assistant professor of agricultural finance in the Departments of Agricultural and Consumer Economics and Finance. Bradley D. Lubben (Agricultural Policy), extension educator, Farm Business Management and Marketing, Cooperative Extension Service. Eric A. DeVuyst (Site-Specific Agriculture & Environmental Issues), assistant professor of production and natural resource economics, Department of Agricultural and Consumer Economics. LeeAnn McEdwards Moss (Site-Specific Agriculture & Environmental Issues), research specialist, The Center for Farm and Rural Business Finance. David A. Lins (Livestock Production), professor of financial management, Departments of Agricultural and Consumer Economics and Finance. Author photos are courtesy of the College of Agricultural, Consumer, and Environmental Sciences.

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provides a significant increase in planting flexibility, but also shifts the responsibility for managing risk from the federal farm program to the farmer. While the old federal farm program tied support payments to restricted crop production, the new program allows almost complete planting flexibility. Producers will be able to consider market conditions when they make production decisions. They will be able to respond to growing market demand with increased production and to compete more efficiently in the world market-place.

Illinois producers will become more responsible for their own risk management in all their decisions. Historically, the level of federal farm supports was based on the difference between the current market price and an established target price. Thus, payments helped to counter-balance market price fluctuations. However, government payments under the FAIR Act are fixed for the duration of the contract and, thus, will not mitigate any of the potential fluctuations in market prices. New risk management tools now developing in response to changing federal farm policy will offer increased opportunities and choices. Producers will need to assess their risk to determine the best combination of marketing tools, insurance policies, and management decisions to handle their risk effectively.

With the landmark change in federal farm policy signaling a reduced government role in farming, interest will shift to other issues such as environmental policy, property-rights issues, tax policy, and international trade. Environmental policies of interest to agriculture go far beyond the implementation of the conservation title of the FAIR Act. They include issues such as the Endangered Species Act and the impact that similar legislation has on

## ***The 1996 FAIR Act shifts responsibility for managing risk from the federal farm program to the farmer.***

property rights and the decisions farmers must make. Some of these issues even extend beyond the border of the United States and are part of the broad range of issues involved in negotiations on international trade, which will become increasingly important as the role of the government in farm programs continues to decline. Agriculture is also strongly affected by tax policies and changes, especially in the areas of capital gains taxes and estate taxes. Although the FAIR Act of 1996 may have signaled the beginning of the end of government involvement in farm programs, it certainly does not eliminate the potential impact that government can have on agriculture through other policies.

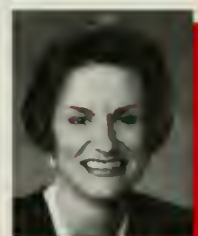
### **Site-Specific Agriculture**

Farming in Illinois is becoming increasingly high-tech. Since the early 1990s, terms like global positioning systems (GPS) and variable-rate technology (VRT) have become common in the language of Illinois farmers. GPS refers to the satellite link-up that permits farmers to identify and map specific points on their fields. VRT (also known as site-specific farming (SSF), precision farming, or prescriptive farming) refers to the ability to vary application rates for fertilizers or pesticides as the farmer moves across his fields. Instead of fertilizing the entire farm at the same rate, farmers can apply

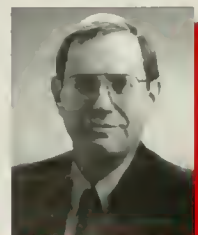
soil treatments that more precisely match the particular needs and soil characteristics of each point in the field. The system requires a significant investment in equipment, soil mapping, and testing. A computerized map of soil types and fertility rates must be generated after testing is done for each field (often on a 2.5 acre grid). The individual applying the fertilizer must have a computer-controlled applicator linked to a differential GPS receiver



Eric A. DeVuyst



LeeAnn McEdwards Moss



David A. Lins



Precision farming requires a significant investment in equipment, soil mapping, and testing.

## ***In the 1950s, livestock accounted for approximately 50 percent of total farm income. It now accounts for only about 20 percent.***

and satellites. The GPS receiver continually updates the applicator's position in the field. The computer reads the stored soil and fertility map to determine the desired treatment rate, and the application rate is adjusted accordingly.

Illinois farmers also use GPS technology at harvest. Linked to a yield monitor in the combine, computerized yield maps can be generated that give precise yield levels at a given point in a field. This information can be used not only to fine tune future fertilizer application rates, but also as a diagnostic

tool. If a particular area of a field is producing fewer bushels per acre than the field average, the farmer will know the precise location of the problem and can better investigate its cause.

At present, site-specific farming is used primarily for the application of fertilizer and lime. However, there are many other potential uses. For

example, SSF could be used with most chemical applications to adjust treatment levels to actual needs. Also, pest infestations can be mapped with handheld computers linked to a GPS receiver, allowing site-specific treatment in the next growing season.

Despite the excitement over SSF, researchers continue to address questions about the technology. We still do not know whether it is more profitable in the long run than uniform treatment of a farm field. It is known that SSF becomes more profitable as the variability in fertility rates increases within a field, though completing the detailed soil sampling and adopting the technology required can be

expensive for an individual producer. Illinois farmers can avoid purchasing some of the equipment by hiring a custom applicator. Many of the large agricultural input suppliers in Illinois offer some level of SSF services. The farmer must consider the start-up cost, return on investment, and flexibility of any system.

The environmental friendliness of site-specific farming is a related issue. While areas of a field that have higher fertility will have less fertilizer applied and, therefore, pose less environmental risk, areas that are less fertile could receive increased application. If these less fertile areas are more prone to erosion, increased levels of fertilizer (attached to the soil particles) might reach rivers and lakes. However, true site specific farming based on soil type characteristics can adjust application rates to fit more closely the nature and potential of the soil types, not just the fertility levels indicated by soil sampling. For example, naturally low fertility and erosive soils can be treated differently from less erosive soils.

As an increasing number of farmers adopt SSF technology and ongoing research is concluded, questions regarding profitability, reliability, and environmental implications will be answered. Illinois farmers will continue to make increasing use of high technology in exploring even more progressive ways of delivering a safe and abundant food supply.

## **Livestock Production**

A significant structural change in Illinois agriculture is the shift away from livestock production toward crop production (see Table 1). In the 1950s, livestock accounted for approximately 50 percent of total farm income. It now accounts for only about 20 percent of total farm income in Illinois.

A variety of factors have contributed to the decline of the livestock industry in the state. First, and most important, the relatively greater profitability of crops over livestock has encouraged farmers to shift to crop farming. Low profits in cattle feeding, for

example, have caused many farmers to eliminate cattle from their operations. Changes in the mix of farming enterprises also translates to changes in the types of crops produced. Acreage planted in crops to support livestock has been replaced with exportable commodities such as corn, soybeans, and wheat.

**Table 1. Number of Illinois Farms with Livestock**

**Illinois now also has fewer, but larger livestock operations.**

	Cattle	Milk Cows	Hogs	Sheep
1950	163,000	147,000	140,000	22,000
1960	115,000	52,000	92,000	26,000
1970	68,000	16,000	50,000	13,000
1980	50,000	6,500	30,000	7,000
1990	33,000	3,900	15,300	5,100

Source: Illinois Agricultural Statistics

**Table 2. Illinois Farms and Farmland**

**Since the '50s the number of Illinois farms has decreased while size has increased.**

	Number of Farms (thousands)	Land in Farms (Acres)	Average Farm Size (Acres)
1950	203,000	31,700,000	156
1960	159,000	30,700,000	193
1970	128,000	29,500,000	230
1980	107,000	28,800,000	269
1990	83,000	28,500,000	343

Source: Illinois Agricultural Statistics



Another reason for the decline of the livestock industry is that the business climate in Illinois has been perceived to be less favorable than that of neighboring states. For example, a recent study conducted at the University of Illinois at Urbana-Champaign revealed that worker compensation laws were a perceived impediment to locating new livestock facilities in Illinois. As the livestock processing industry in a geographic area declines, farmers face increased costs in shipping animals to market, making it difficult to remain cost effective.

Livestock farming in Illinois is also tending toward fewer but larger farms. From 1950–1990 the numbers of farms has declined and average farm size has increased (see Table 2). The concentration of livestock farming into larger and larger operations raises environmental concerns related to odor and waste.

Pork production is undergoing a dramatic change with the movement to large-scale integrated production units. Public concern has been heightened by the fear of odor and potential pollution from such large-scale units. Some people have called for a moratorium on permits for lagoons and other structures needed for the large-scale production units. Others have expressed concern over the potential adverse economic effects on smaller-scale producers. Organized farm groups, such as Farm Bureau and the Illinois Pork Producers Association, have generally supported large-scale hog production units, arguing that restrictions will continue to erode the livestock industry in Illinois. Future efforts to control the adverse environmental impact of livestock production need to be balanced against the economic benefits arising from this value-added industry.

## Environmental Issues

Discussion of the effects of production agriculture on environmental quality in Illinois continues. Illinois farmers are exploring and incorporating safer and more efficient means of producing agricultural commodities into their farming operations to the benefit of the industry and the community at large.

As outlined in the first section of this article, government policies and industry pressures have increased the number of acres in Illinois devoted to the production of row crops. Agricultural land that is tilled for row crops is more vulnerable to wind and water erosion. Since row crops require more fertilizers and pesticides than other crops, increased production of row crops can increase the potential for surface and ground water contamination.

However, Illinois farmers have responded to these potential problems by adopting a variety of environmentally friendly practices. The use of reduced



Photo: Paul Hixson; Courtesy of ACES Information Services.

A hog confinement facility in Southern Illinois.

tillage and conservation tillage on many soils is now common. Many agricultural chemicals are now applied after the new crop is growing when the treatment is more directly related to the actual rather than an anticipated weed or pest problem. Grassed waterways and terraces on farms with rolling topography, subsurface drainage tile, and grassed filter strips between field boundaries and drainage ways all help in controlling erosion.

In the past, wetlands were often drained for agricultural use. However, it is now recognized that wetlands serve important environmental functions, providing wildlife habitat and water filtration. Previous farm bills have provided for severe penalties for draining wetlands and converting them to crop production. Although the 1996 Farm Bill allows farmers more flexibility in complying with wetlands conservation requirements, the goal of wetland protection is no less important under FAIR.

There is, as we mentioned earlier, growing concern about the potential impact of large-scale hog farms on environmental quality in Illinois. Hog production units of any size must deal with the effects of manure handling and odor on their communities. The level of concern over potential environmental damage increases with the scale of the

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***The Conservation and Wetland Reserve Programs will continue to provide erosion control, wetlands and wildlife protection, and water quality improvements.***

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hog farm. As the number of hogs at a particular facility increases, so does the volume of manure stored and the potential for a failure in the waste handling system, polluting a larger volume of water.

Illinois has very stringent laws regulating the operation and placement of new hog operations. For example, there are strict requirements for distance from inhabited dwellings, communities, and streams. The FAIR Act also addresses this issue. Under the Environmental Quality Incentive Program, livestock producers can receive cost-sharing and technical assistance to improve and protect the quality of the environment.

Agricultural policy will continue to influence Illinois environmental quality. The FAIR Act allows increased planting flexibility, and annual acreage set-aside requirements have been eliminated. As a result, tens of thousands of acres that would have been idled in the past will now be producing crops, requiring the application of greater amounts of fertilizers and pesticides. Illinois farmers, however, will

respond by balancing economic incentives for increased production with their ongoing concern over the stewardship of their farmland assets.

The FAIR Act of 1996 has many provisions that are friendly to the environment. Most notably, the Conservation Reserve Program and Wetland Reserve Program have been renewed. Both provide annual payments to farmers to idle land for a specified number of years (10 years and 30 years, respectively). The environmental benefits that these programs have provided have resulted in public support for their renewal. These programs will continue to provide erosion control, wetlands and wildlife protection, and water quality improvements, under the new legislation.

For more information on any of the issues in this article, contact any of the authors at the Department of Agricultural and Consumer Economics, 305 Mumford Hall, 1301 West Gregory Drive, Urbana, IL 61801 or consult the web site: <http://w3.aces.uiuc.edu/ACE/Welcome/index.html>.

# Income Trends in Illinois

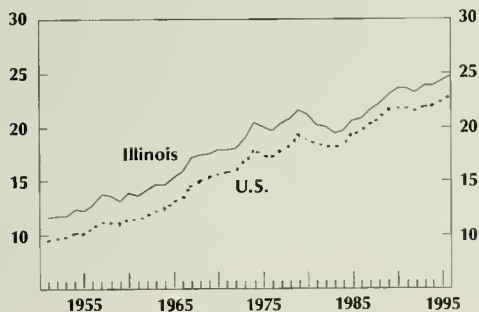
By J. Fred Giertz and Shekhar Mehta

**Illinois has long enjoyed a per capita income above the national average, and the trend will probably continue.**

**A**LITTLE NOTICED FEATURE OF THE ILLINOIS economy in recent years has been the strong growth in per capita personal income. After many years of lagging the national growth rate, in the last ten years Illinois per capita income has grown more rapidly than the national rate. It should be noted that the entire period has been characterized by consistent growth for both Illinois and the nation, aside from a period of stagnation in the late 1970s and early 1980s (see chart below).

## **Per Capita Income: 1950-1995 (thousands of constant 1995 dollars)**

The entire period has been characterized by consistent growth for both Illinois and the nation.



From 1950 to 1995, real per capita income in the United States grew at an annual rate of 2.0 percent while income in Illinois grew at a 1.7 percent rate. More recently, from 1985 to 1995, the Illinois growth rate of 1.7 percent exceeded the national average of 1.5 percent. It should be noted that growth in

Illinois total personal income (the total income earned by all workers in the state, as opposed to per capita income) was considerably slower compared with other parts of the country because of relatively slow population growth.

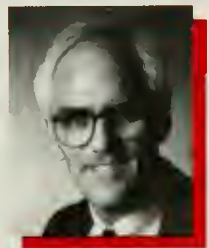
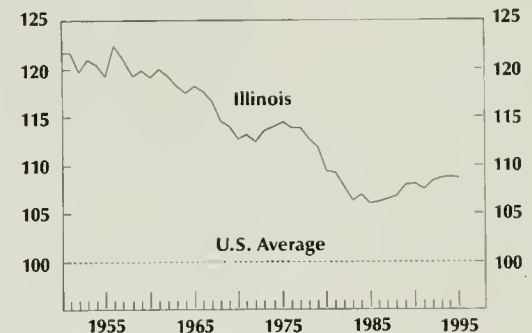
Illinois has been, and remains, a prosperous state. Illinois per capita income has been consistently above the national average since 1950. In 1995, the Illinois per capita income of \$24,763 was 108.7 percent of the national average of \$22,788 and was the eighth highest in the nation. Most states with higher incomes were in the Northeast, many with large suburban populations associated with population centers in adjoining states such as Connecticut; Maryland; New Jersey; and, in recent years, New Hampshire. Among large, diversified states, only New York and Massachusetts residents had higher incomes.

In 1950, Illinois had a margin of superiority considerably larger than today (chart above). In the early years, Illinois income was often more than 120 percent of the national average. This ratio declined fairly consistently from about 1960 to the mid-1980s to well below 110 percent.

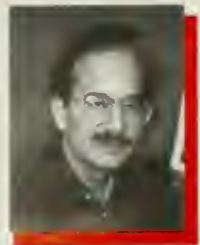
This is really not surprising. Many studies have found that per capita income differences among

## **Ratio of Illinois Per Capita Income to U. S. Average**

In 1950, Illinois had a margin of superiority considerably larger than today.



J. Fred Giertz



Shekhar Mehta

J. Fred Giertz is a professor of economics and a member of the Institute of Government and Public Affairs at the University of Illinois at Urbana-Champaign, and Shekhar Mehta is a research associate with the Institute.

# ***The Illinois economy was much better prepared to weather the problems of the 1990 recession than most areas in the country.***

regions (U. S. states or countries in the world) diminish over time so that high income regions tend to grow at slower rates than low income areas. There are a variety of suggestions as to why this happens:

- ◆ **Diffusion of Technology.** It has been suggested that relatively poor areas can adopt the technologies of more advanced nations without going through the slow and costly process of developing the technologies themselves.

- ◆ **Mobility of Labor and Capital.** When wage rates vary from region to region, labor tends to move from low-wage to high-wage areas and capital from high-wage to low-wage areas. Both of these movements lead to a convergence of wages.

- ◆ **Homogenization of Population Characteristics.** Incomes among various areas will tend to converge when their populations become more alike—as they have among regions across the United States.

- ◆ **Government Policies.** A number of government policies may also contribute. Policies set at the national level (for example, progressive taxation and universal welfare benefit levels) may contribute to the convergence of incomes.

In any event, the forces of income convergence in the United States were relatively strong until the last 10 years. Areas with high income in the beginning generally grew at slower rates than did poorer areas.

It should be emphasized that income convergence does not usually lead to reversals of position. For example, the South started as the poorest region at mid-century and remains so today, although the region now trails the nation by a much smaller margin (chart at left).

There have been some notable exceptions to the trend toward income convergence, for example, the resurgence of the Northeast from the late 1970s through the

mid-1980s. This region moved from second place to first by a wide margin. In this period, the high-income Northeast, which had experienced consistent decline since 1950, suddenly jumped ahead of the rest of the country. This was the period of the “Massachusetts miracle” attributed to the expansion of high-tech businesses, the defense build-up that benefited the Northeast more than other regions, and the growth in financial and legal services before the stock market crash in late 1987. Surprisingly, the Northeast has been able to maintain, although not expand, its dominance since 1986.

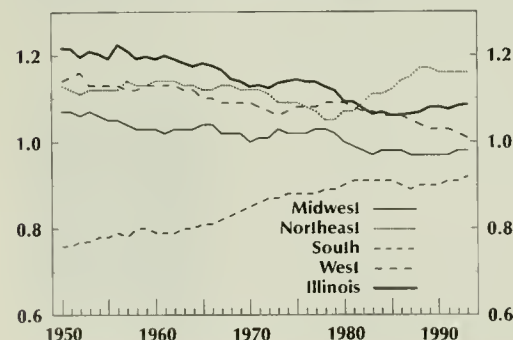
Illinois has also staged a significant, but less dramatic resurgence since the mid-1980s, reversing, at least temporarily, the forces of convergence. Illinois and the Midwest in general were especially hard hit by the recession of the early 1980s. The national recession coincided with a worldwide restructuring of industry that had a particularly negative impact on Illinois, which was heavily dependent on manufacturing and capital equipment. The state and region’s problems were compounded by a high-valued dollar that hurt exports and by the run-up of energy prices in the 1970s. The defense build-up of the Reagan years also shifted resources away from the state, which gets only a small share of defense procurement spending.

This period of austerity had a positive side, however. Illinois firms were forced to make painful adjustments to deal with the changing world economy. This laid the foundation for a strong recovery that has taken place the last 10 years. Note Illinois’ strong performance after 1984. The state’s economy was much better prepared to weather the problems of the 1990 recession than most other areas in the country, and, in fact, the recession was much milder here.

What does the future hold? While there has been a long tendency toward income convergence, in the last two decades the process has often been halted or even reversed for periods, probably in response to unforeseen outside events. Increased interregional and world trade, along with greater capital and labor mobility may have led to a situation in which incomes react more to individual events rather than following long-term trends toward convergence. This means that Illinois need not expect ever-diminishing incomes as compared with the rest of the nation. However, there is no reason to predict that the period of resurgence of the last ten years will continue at such a brisk rate in the future.

## ***Ratio of Regional and Illinois Per Capita Income to U.S. Average (1950–1993)***

The South started as the poorest region at mid-century and remains so today, although the region now trails the nation by a much smaller margin.





# Views from the Business World: Outlook from La Salle Street

By Willard Bunn III

## Steady growth ahead!

**T**HE STATE OF THE ECONOMY IS SOUND. BY ANY conventional measures—and by some unconventional ones—the economy shows itself to be on an even keel and portends steady growth in the months ahead.

First, let us look at the conventional measures:

- ◆ The stock market has continued extraordinary growth; the Dow Jones Industrial Average rose above 6000 for the first time in October, less than a year after first crossing the 5000 threshold. By the beginning of December it had reached 6400.

- ◆ In early December retailers reported that their Christmas sales were off to a brisk start over the Thanksgiving weekend.

- ◆ At the same time the Conference Board announced that its index of leading indicators had advanced for the ninth consecutive month.

- ◆ The unemployment rate declined to 5.1 percent in August from 5.4 percent in July, a seven year low. The number of jobs swelled by 250,000. The Illinois employment rate fell slightly in August, to 5.3 percent, down from 5.4 percent in July.

- ◆ The National Association of Purchasing Management's survey rose to 52.6 in August from 50.2 in July, suggesting that manufacturing activity was expanding.

- ◆ The inflation rate over the last twelve months has been just 2.9 percent.

- ◆ In August builders broke ground on new homes and apartments at the fastest rate in nearly two years. And in November sales of single-family homes remained above 700,000 for the tenth straight month, the longest stretch since a 36-month period between October 1976 and September 1979. Sales in 1996 are 13.5 percent above those of the first 10 months of last year.

Apparently, the Federal Reserve Board agrees with the assessment of a benign economic climate

inasmuch as, at the critical post election meeting of the Open Market Committee in November, it adjusted no rates on financial instruments under its jurisdiction. The December 17 meeting had the same result. The Fed's role here is not an easy one. A former chairman once observed, "We have to take away the punch bowl just when the party is getting going." By that he meant that as the economy heats up and starts to spark inflation, the Fed must cool things off by raising interest rates.

By more unconventional measures, the economy also appears to be in good working order. For example, the market for new equity issues rose to record activity levels in early 1996. The number of equity offerings in March, April, and June made them the strongest months since the record levels of 1993, clearly a reflection of investor confidence in the economy. The large number of initial public offerings (IPOs) under \$50 million reflects a market more receptive to small capitalization stocks and less cautious about liquidity.

At the same time, mergers and acquisitions also continued a brisk pace from 1995 with a number of announced "mega-deals," those over \$1 billion in transaction value, particularly in telecommunications, financial services, and health care. In 1995 mega-deals represented only 1 percent of the number of transactions, but 51 percent of the total transaction value. In contrast, in 1993 mega-deals accounted for just 0.7 percent of the number of transactions and 35 percent of transaction value.

An interesting aspect is that the preponderance of the deal-making has been strategic-buyer driven unlike the deals of the 1980s, which were financial-buyer driven. In many industries consolidation and control over distribution channels are viewed as critical strategies for gaining competitive advantage and increasing shareholder value. Low inflation and



Willard Bunn III

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Willard Bunn III is managing director of the Financial Services-Investment Banking Group of The Chicago Corporation.

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## ***Low inflation and limited internal growth have both provided ideal stimulants for more mergers and acquisitions.***

limited internal growth have both provided ideal stimulants for more mergers and acquisitions.

The recently announced acquisition of Boatmen's Bancshares in St. Louis by Nationsbank is a perfect example of a large premium over book value being paid by an acquirer to further its strategy, in this case a nation-wide presence. Nationsbank agreed to pay \$9.5 billion, the third highest price ever paid for a

bank, to acquire Boatmen's. The acquisition will make Nationsbank the country's fourth largest in terms of assets and give it a string of 2,600 branches spread across 16 states and the District of Columbia.

One other interesting aspect of the merger and acquisition activity is that historically it has been relatively counter-cyclical with initial public offerings. Current strong performance in both sectors reflects attractive valuation opportunities in the public market and premium valuations in the merger and acquisitions market—not to mention the underpinnings of a vibrant economy.

In sum, the strong signals from the economy suggest to me a case of moderate growth with moderate inflation over the next several quarters. The bullish stock market also suggests that merger and acquisition activity is likely to continue to flourish.

## ***Views from the Business World: Credit, Bankruptcy, & the Information Age***

By Gregory B. Lykins and Robert L. Plankenhorn

### **Even with personal bankruptcies at record levels, easy consumer credit is here to stay.**



Gregory B. Lykins



Robert L. Plankenhorn

**W**ITH BANKRUPTCY FILINGS AT AN ALL time high, it seems paradoxical to say that credit is readily available. Certainly, creditors tighten their lending standards in the face of rising bankruptcies. However, there is, in fact, brisk competition to make credit available. Three major trends have contributed to the ease of borrowing. First, easy credit is required to enable consumers to buy the goods produced by our economy. Second, social policy dictates that there should be no discrimination in the extension of credit: it should be available to everyone. Third, lending is a profitable business. These trends will

continue in the Information Age when elegant applications of knowledge will be used to promote the extension of credit.

The increased availability of credit to borrowers other than governments and big business emerged, along with mass production, the national market, and mass consumption, in the early decades of this century. Railroads, with their steel rails, made it possible for people to travel throughout the country and for farmers, miners, and loggers, to get their products to the market. With efficient transportation, manufacturers could reach consumers throughout the nation, and they mass produced goods for

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this national market. With mass production, supply could exceed demand—unless mass consumption could be sustained.

Extending credit was a way of sustaining consumer demand. Lending bridges the gap between the need for cash and available money. When a young couple buys their first home, the builder demands the purchase price at closing. The couple would have to toil for 20 years for the cash required to meet the purchase price. The act of lending allows the couple to buy the house now and repay the lender over the next 20 years. Without the lender, the couple would have to save until they acquired the purchase price. Since they would be paying rent at the same time, they might never save enough. The couple would never own a home, and the builder would never sell a house!

By the early 1900s, consumers were able to obtain credit. In 1910 in Norfolk, Virginia, attorney Arthur J. Morris started Fidelity Savings & Trust Bank. This was a new type of institution that made loans on a borrower's character and earning power.

A typical Fidelity Savings and Trust loan required two additional persons to co-sign (become obligated to repay) the promissory note. The loan bore an interest rate of 6 percent, subtracted from the proceeds at closing. Besides the interest, there was a 2 percent fee. The consumer would only receive 92 percent of the loan. Then, the loan was repaid in 50 weekly installments. The annual percentage rate on the loan was more than 19 percent.

Another step in the development of consumer credit was in the late 1920s when Roger Steffan, manager of National City Bank's consumer credit business, decided that with the bank's cost of funds at 3 percent and its earnings on its consumer loans on average 12 percent, this was profitable business. With the workers' jobs relatively more plentiful than the bosses' jobs, Steffan felt, further, that workers were a better risk than the bosses.

The realization that consumer finance was profitable inevitably drew more financial institutions into the business of consumer lending. The availability of credit enabled consumers to buy the goods produced by American manufacturers.

Financial institutions, working to increase their shareholders' wealth, viewed consumer finance as a profitable business. The profits are not greatly different today than in Steffan's time. The credit card industry has a cost of funds of approximately 5 percent. It has an average yield of 17 percent. With the net overhead and bad credit expenses recognized, the credit card industry expects a return of 3.3 percent on investment, before taxes. The growing number of lenders made consumer credit increasingly available. This easily available credit has

produced an interesting corollary: a high rate of consumer bankruptcies.

In the second quarter of 1996, 3.6 percent of all credit card accounts were delinquent. This is the highest rate on record with the American Bankers' Association. Personal bankruptcies are up 23 percent over last year, a ten year high. It is projected that 1.1 million households will have filed for bankruptcy in 1996.

It is unlikely that the trend will change. American public policy, embodied in the bankruptcy laws, has been to give the debtor the opportunity to start over. Higher bankruptcies are one of the costs associated with credit extension. Also, in this country public policy has been to press for the equal opportunity for credit.

As we have entered the Information Age, knowledge has surpassed labor and capital as the means to wealth generation. With employment in the United States at a level that would have been considered inflationary in the past, there are no inflationary pressures. The application of knowledge is required to make the most of labor. Increased automation and information management are making current labor pools more productive. Nor is capital scarce. Baby boomers are saving furiously for their retirement. Knowledge applied to the use of capital, through the extension of credit, will leverage its productivity.

To continue to reduce the cost of consumer credit, financial institutions dispense credit on a "mass production" scale. Credit bureaus supply lists of prospects and their credit scores to the financial institutions. Credit underwriting, on this basis, may skip several important, yet costly steps. Those potential losses are controlled through statistical risk management.

In the Information Age, financial institutions will accelerate the use of mathematical techniques, probability and statistics, to provide credit. The same characteristics that lend themselves to statistical analysis will also allow lenders more flexibility in raising capital to lend.

Financial institutions have used two techniques for risk management. The first is diversification.

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***Financial institutions, working to increase their shareholders' wealth, viewed consumer finance as a profitable business.***

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## ***Turning loan pools into securities will accelerate as the knowledge of statistical techniques is applied to more classes of financial assets, fostering an ever increasing expansion of credit.***

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Commercial banks, for example, are generally limited to lending no more than 15 percent of their capital to any one borrower. In practice, the percentage is much lower. Lenders spread the risk over a large base. The second technique is to shift the risk. In small business lending, agricultural lending, and home lending, there are federal guaranty programs. In addition, lenders have increasingly recognized the benefits of applying statistical techniques to lending.

When the lender considers its diversified client base as a population sample, it can begin to make statistical inferences about future events based on

experience. With statistical analysis, the delinquency rate and loss rate for a portfolio of similar loans can be predicted. The prediction of delinquency and loss is then included as a cost of doing business. The expected return is a function of the interest earned, less all the expense, and the probability that the principal and interest will be returned to the lender.

A pool of individual loans, described by its economic and statistical characteristics, becomes a commodity. When they have the same characteristics, one pool of loans is no different from another. The pool of loans is then packaged as a negotiable security. Selling the securitized loans through the capital markets enables the lenders to raise capital more efficiently. Securitization also allows the lenders to shift the risk of loss to the buyers of the loans.

In the Information Age, the securitization of loans will accelerate as the knowledge of statistical techniques is applied to more classes of financial assets. This increase in productivity will foster an ever increasing rate of expansion of credit. Along with the increase in credit, bankruptcy will increase. However, since the cost of bankruptcy will be included in the cost of credit, the trend of social policy for easier credit will not change.

## ***Views from the Business World: Alternative Financing Is Here to Stay***

By Peter Fox

### **Structural economic changes such as bank consolidation and the proliferation of new enterprises have made alternative financing an important part of the funding of new and expanding businesses.**

**A**LTERNATIVE FINANCING IN THE COMMERCIAL sector can be broadly defined as any "nontraditional" source of funding. To understand why alternative financing is becoming a more common source of funds and why its importance will continue to grow at an accelerating rate

over the next ten years, one must understand how traditional financing markets work, as well as the fundamental changes that are taking place in the business sector.

Historically, most businesses relied on commercial banks as a source of business loans. Generally

speaking, small and mid-size companies traditionally borrowed from a local bank with which they already had a commercial depository relationship. In some cases, the commercial relationship developed because a principal of the company had a personal depository account with the financial institution. For equity sources (investment funds), principals utilized their personal resources and money from close family and friends.

The mid-1990s have seen a mass migration towards nontraditional sources of financing. The reasons for this shift are the same ones that will cause the trend not only to continue, but accelerate as the U.S. economy enters the new millennium. Although many factors contribute to the trend, I will focus on the major reasons that it is likely to continue.

## Conservative Commercial Lenders

Traditional commercial lending institutions have maintained very conservative lending policies towards small commercial clients. This is, to some extent, a function of the severe losses recently suffered by banks and savings and loans—even though the small business sector was not the major cause of the losses. The disappearance of the “hometown bank” that prevailed for many years has been one factor driving conservative business lending. Although local banking officers frequently continue to staff local facilities after their institutions have been bought by regional or national megabanks, the policies and final lending decisions are usually centrally controlled. Consequently, personal relationships with the local bankers no longer carry the value they once did.

## Growth in the Service Sector

Most commercial lenders have traditionally made loans based on tangible assets of the enterprise in question. An asset-based lending formula is typically used to approve a loan based on a certain percentage of a company's eligible accounts receivable, inventory, and machinery. In some cases, term loans are provided for certain types of machinery with relatively long useful lives. This model has served the U.S. economy well for a number of years. However, most of the recent growth in our economy has been (and will continue to be) in the service sector. In particular, the growth has come in those industries such as

consulting, software development, and small retail concerns that do not have significant tangible assets. Therefore, the demand for commercial lending in this sector has greatly outstripped the ability (or willingness) of the lenders to provide the financing.

## Greater Number of Small Businesses

Due in large part to corporate downsizing and disenchantment with the large industrial work environment, there has been a growing trend for employees to start their own companies. The days of lifelong careers with a single Fortune 500 employer are over. There will continue to be more and more people able and interested in leaving their employers to start their own businesses. The consequences will be more startup and early-phase companies, typically with fewer than 100 employees. Another factor that contributes to making people willing to start their own businesses is the fact that those now entering the workforce do not have parents that suffered through the Great Depression of the 1930s. Therefore, these new employees are more likely to have been raised in a home environment less concerned about steady, dependable employment for life. Commercial banks are not particularly eager to lend to young, unseasoned entrepreneurs, especially those without years of experience managing a business similar to the one for which funding is being sought.

## A Shortage of Funding Sources

A number of factors have left “family and friends capital” in short supply. The dramatic return on investments in stocks of publicly traded companies over the past few years have made such investments much more appealing for people willing to take a moderate risk with their available monies. Also, the

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***The dramatic returns on investments in the stock market over the past few years have made stocks much more appealing than investing in your brother's business venture.***

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Peter Fox is a senior managing director in Bear, Stearns & Co.'s Chicago office. The author would like to acknowledge Jim Schnorf, CEO of Cardinal Capital, L.L.C., a Champaign, Illinois-based firm that provides alternative debt and equity financing and third-party broker financing to small and mid-size companies, for his contribution towards this article.

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Peter Fox

tremendous growth in the number of entrepreneurial ventures has created unparalleled competition for such funds. Even though venture capital firms have been providing unprecedented levels of funding to companies that meet their criteria, many venture groups are highly selective in the type of business and geographic location in which they invest or lend.

There is no question that those who provide nontraditional funding to small and mid-size companies will find continuing opportunities for double-digit growth (in both volume of transactions and total dollars) over the next ten years. The "alternative financing" industry is, to some extent, recession-proof, in that commercial lenders will further tighten lending guidelines if and when the economy weakens. Also, stock market investment will decrease in a down market, freeing capital for alternative uses.

## Successful Alternative Financing for the Future

Although a number of as yet unknown economic, legislative, and technological factors will largely dictate the determinants of the relative success and failure of these alternative financing vehicles, certain key attributes for those that will succeed can be identified today:

- ◆ Focus coupled with diversification
- ◆ A steady flow of quality deals to review
- ◆ A predictable and competitive "cost of money"

source

- ◆ The ability to analyze quickly and respond to opportunities
- ◆ Proper risk-taking relative to value

Too many venture firms today have focused their funding on unduly narrow company profiles or geographic boundaries. Although a narrow focus does have advantages, particularly the reduced risk that comes from a more intimate knowledge of the client

base, such a philosophy can cause the financier to dismiss attractive opportunities simply because the transaction falls outside the restrictive parameters that have been established. Successful financiers of the future will maintain a core focus yet will diversify so as

to participate in a high percentage of the attractive business opportunities they encounter.

A continuous flow of quality opportunities will be vital for success. The successful firms will find ways to improve the ratio of high quality proposals

they receive. The most cost-effective method of increasing the percentage of quality proposals received is to develop a network of relevant, reliable referral sources. The successful alternative financing firm of the future will develop and maintain a network of contacts among accountants, attorneys, banks, and, potentially, venture capital funds—groups from whom companies in search of funding may seek assistance.

It is crucial for an alternative financing firm to maintain a predictable and low-cost source of funding for its transactions. The firm must appropriately match the cost and maturity of its funding sources with the needs of its client companies. Predicting the timing of the maturation of cash flows from minority equity investments in companies with minimal short-term liquidity can be particularly challenging. The successful alternative financiers of the future will have a substantial portion of their own funding structure suitably tailored to the nature of their transactions.

Since businesses seeking alternative financing are, as a rule, talking to a variety of potential financiers and since many of the proposals have already been rejected for traditional financing, it is important to be able to provide the prospective client with a prompt "preliminary level of interest" that will serve to establish the relationship and help to consummate the transaction. One must assume that firms with high quality proposals who approach nontraditional financiers will be able to find alternative sources of funding.

Finally, successful alternative financing companies will be able to determine and accept the opportunities that provide the greatest value relative to risk. Such companies will likely be seeking to hit singles and doubles (and avoiding strikeouts) rather than swinging for home runs and encountering the resultant strikeouts. However, one must design the financier's loan, equity, and third-party financing services so that an occasional double can turn into a home run.

## Seeking Alternative Financing

Businesses seeking funds from alternative financing sources should always make sure that sound business plans, including financial projections, are part of the proposal. The appearance, thoroughness, and general professionalism shown can often play a significant role in the acceptance or rejection of the proposal.

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***The "alternative financing" industry is, to some extent, recession-proof.***

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# Views from the Business World: The Two-Pronged Solution

By David Hunter

## A case study of how the combination of economic forecasting and a revamped operating model solved a major problem for an Illinois manufacturer.

**A**LTHOUGH THE DOLLAR VALUE OF ROAD WORK performed and the tonnage of asphalt concrete laid is quite stable from year to year, the market for the Blaw-Knox paving equipment my company makes is strongly cyclical. In industries such as ours, each competitor's success in responding to these dramatic cyclical swings has a significant impact on their market share, profitability, and asset efficiency. The difficulty is how to forecast cycles that seem to make so little sense.

In order to try to get a handle on the problem, we worked with an outside economic consultant who ran correlation analyses of data both for our industry and our own shipments against a variety of economic data. This process looked for leading, lagging, and coincident correlations between actual data series and rate-of-change indexes. Our objective was to determine whether any of the widely followed and forecast economic data series have a consistent enough correlation with our industry to be useful in anticipating upward and downward swings in our business.

The results of the study were surprising because the highest correlations were with two series that appear to have little direct relationship with our business—industrial production and housing starts. Trends in these areas seemed useful in anticipating an upturn or downturn in our business. However, they provided only a cautionary signal and not a clear indicator of the timing or potential magnitude of an increase or decrease in business.

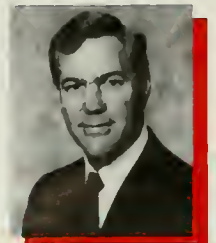
We concluded that without a reliable forecasting tool we needed to reduce our need to forecast. Our search for the underlying factors that contributed to the cyclical swings in our business found that, in fact, our own slow response to dealer orders was a major factor. Customers generally expect immediate delivery, and our delayed delivery required dealers to maintain large inventories in order to have products available for customers when demand was strong. The dealer demand for inventory tended to exaggerate the strength of a rising market. During weak markets, dealers reduced inventories and actually intensified our downturn.

We set to work to shorten dramatically the time required to produce a unit in our factories in order to minimize the inventory our dealers needed to carry to assure prompt delivery to their customers. We also reduced the number of options available on our products, which permitted further reductions in dealer inventory. The end result has been a significant reduction in the need for dealers to hold a large inventory in order to satisfy customer orders. This, in turn, has reduced the roller coaster effect of

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***In fact, our own slow response to dealer orders was a major factor in the sharp cyclical swings in our business.***

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David Hunter

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David Hunter is President of Blaw-Knox Construction Equipment Corp., Mattoon, Illinois, one of the world's largest producers of highway paving equipment and a subsidiary of Ingersoll-Rand Company.

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dealer inventory accumulation and liquidation on our business over the cycle.

We believe that this combination of a macro economic forecasting model designed to provide early warning of a change in activity and an operating model that is designed to dampen rather than amplify cyclical swings will provide a better business solution than any approach that relies purely

on either forecasting or operating strategies. If the recent weak growth in industrial production and spotty performance in housing starts does mean a weaker 1997 then we will be ready. Our inventories are down, so we will not have to compete with our own past production and our lead times are short enough to meet customer needs as they develop.

## 1996 Illinois Statistical Abstract

**F**ACTS, FACTS, AND MORE FACTS. THAT'S WHAT the *1996 Illinois Statistical Abstract* has. This convenient, informative resource book contains almost 900 pages of tables, charts, and maps, with facts about Illinois, Chicago, the state's other cities and towns, and all 102 of Illinois's counties.

Gary Wisby, a Chicago Sun-Times writer, said, when reviewing an earlier edition, "Although [it] isn't bedside reading, it won't put you to sleep, either." Some interesting facts from the 1996 edition:

- ◆ In 1995 there were 34,495 new businesses incorporated in the state; 42,771 businesses declared bankruptcy in the same year.
- ◆ The highest infant mortality rate in Illinois in 1994 was in Schuyler county: 54.1.
- ◆ Calhoun and Henderson counties had the highest rate of death from cardiovascular diseases in 1994—61.19; Johnson county had the lowest rate with 36.11.
- ◆ Illinois Beach had the highest attendance of any state park in 1995 with 3,122,211.

◆ In 1990 the average commuting time in Illinois was 25.1 minutes; Cook county residents had a mean commute of 29.4 minutes, while in Coles county the commute averaged only 14 minutes.

◆ Lake county had the highest operating expense per student in public schools for the 1993–94 school year—\$6,413. Richland county spent the least, \$3,683.47 per student.

◆ In 1995 9,249 bachelor's degrees and 6,769 master's degrees were awarded in business and management; 5,465 bachelor's and 5,861 master's degrees awarded in education.

◆ From 1983 to 1993 Illinois energy consumption increased by 176 trillion BTUs.

The book includes 28 chapters exploring topics as varied as agriculture, business activity, tax rates energy use, crime, education, housing, population, recreation, and retail sales.

A softbound copy of the *1996 Abstract* is \$50. A computer package, containing both the book and diskettes, is \$90, and can be ordered for either PC or Macintosh systems. The CD-Rom package, new this year, is \$100.

***"Although [it] isn't bedside reading, it won't put you to sleep, either."***

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# The 1997 Outlook

By Richard J. Arnould

## The Illinois economy will continue steady growth over the next few years as will the nation's economy.

**O**NE YEAR AGO AT THIS TIME I WROTE MY first note on forecasting. At that time I did not anticipate that I would write only two such articles. Actually, I would not need to write a second article. The forecasts developed this year from the Illinois Econometric Model are so similar to those of last year that the same comments could be published again!

Let me remind readers again that the Illinois Econometric Model involves a technical process of using a large number of equations to tie the Illinois economy to national forecasting models developed by others and from those links estimate various aspects for the Illinois economy. Although sometimes such a model provides very unrealistic forecasts, our model has been generating very accurate predictions. While it will take another year to determine the accuracy of the forecasts in this issue, the arm chair forecaster must say that they appear to be quite realistic.

There seems to be a consensus that the Illinois economy will continue steady growth over the next few years as will the U. S. economy. In 1997, robust growth of nearly 5 percent in the gross state product will be driven by strong wholesale and retail trade and the services sub-sector. After 1997, the economy will continue to grow, but at much slower rates at least until the end of the century. Employment growth should be quite modest over the next three years, but personal income should increase by between 2.5 and 3.5 percent annually, and retail sales

should grow at much better rates in the next three years than they have in the past three. The only negative numbers in the forecast are very small drops in income in nondurable manufacturing expected in 1998 and 1999.

Although the state revenue picture has improved considerably over the past two years due to an improved economy, there are challenges to be met in

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***Retail sales should grow much better in the next three years than in the past three.***

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the form of questions of educational funding reform and in the 1996 welfare reform legislation, which is as yet a mystery card that could provide a significant challenge to the state in its provision of services to welfare recipients.

I want to draw your attention to an innovation we have made in this issue. We have drawn on the expertise of business and professional men and women to provide readers with their assessments of various issues of significance to current and future economic conditions. We thank each of them for their contributions and hope you, our readers, gain from their insights.



Richard J. Arnould

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Richard J. Arnould, special editor for this issue, is the former editor and currently the head of the Department of Economics, University of Illinois at Urbana-Champaign.

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# **Illinois Economic Outlook**

## ***Illinois Economic Forecast***

### ***Regional Forecasts for Chicago, Bloomington-Normal, Decatur, and Rockford***

### ***The State's Financial Future***

### ***Exports in 1997***

### ***Agriculture Evolves for a New Century***

### ***Income Trends, 1950–the Future***

### ***Views from the Business World***



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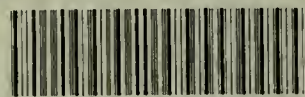








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